

Overview

KEMET's VK series of dual function protective devices protect against voltage surges in a low voltage region and against high frequency noise, replacing two components, those being a low voltage varistor and a capacitor.

KEMET's VK series incorporate a varistor function in the DC voltage range from 3 – 125 V (up to 170 V upon request) and function as high frequency by-pass capacitors operating in the capacitance range from 10 nF – 1 μ F. Lower capacitance values are also available. They are intended for protection of all sensitive electronic devices experiencing both voltage transients and high frequency noise produced by electromechanical devices, such as buzzers, relays, etc.

KEMET's VK series are square shaped components with in-line leads and require at least 30% less mounting space.

Applications

Typical applications include electrostatic surge absorption, relay surge suppression effect and relay reset time, and piezoelectric buzzer shock noise absorption in micro controllers, relays, DC and micro motors, exchangers, phone terminals and antennas as well as automobile electronics including wiper motors, central locking systems, seat adjustment motors, seat heating, and electric window systems.

Benefits

- AEC-Q200 qualified Grade 1
- Through-hole form factor
- Operating ambient temperature of -40°C to +125°C
- Operating voltage range of 3 – 125 VDC
- Operating voltage range (V_{rms}) 2 – 95 V
- Capacitance range at 1 kHz of 10 nF – 1 μ F
- Capacitor temperature characteristics X7R
- Dimensional and weight savings on the board
- One standard model size available, 6 x 9 mm
- RoHS Compliant with Exemption 7c1



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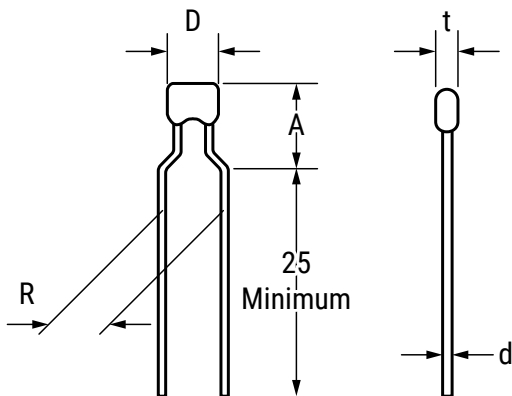
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Ordering Information

VK	103	M	M	151	R	002	P050
Series	Capacitance Code (nF)	Capacitance Tolerance Code	Tolerance of Varistor Voltage	Maximum Surge Current Code	Packaging/Lead Style	Maximum Continuous Working Voltage (Vrms AC)	Pitch Code
Varistor Dual Function Leaded 125°C Low Voltage Automotive Grade Varistor/Capacitor (X7R Dielectric)	103 = 10 104 = 100 105 = 1,000	M = ±20%	K = ±10% L = ±15% M = ±20%	151 = 150 A	R = Bulk B = Reel	002 = 2 004 = 4 006 = 6 008 = 8 011 = 11 014 = 14 017 = 17 020 = 20 025 = 25 030 = 30 035 = 35 040 = 40 050 = 50 060 = 60 095 = 95	P050 = 5 mm

Dimensions – Millimeters



As per part number table.

Environmental Compliance

RoHS Compliant with Exemption 7c1

Disclaimer

YAGEO Corporation and its affiliates do not recommend the use of commercial or automotive grade products for high reliability applications or manned space flight.

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Although KEMET designs and manufactures its products to the most stringent quality and safety standards, given the current state of the art, isolated component failures may still occur. Accordingly, customer applications which require a high degree of reliability or safety should employ suitable designs or other safeguards (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 property damage.

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.

KEMET requires its products to be packaged and shipped on pallets. This is because KEMET's products are specifically designed to be packed onto pallets during shipment. If for any reason, the products are removed from pallets by the shipping party and shipped to the end customer, then additional external protection is required. In this instance, an external box with two carton layers and an upwards orientation sticker must be used by the shipping party, with the empty space filled with filling material, and afterwards sealing the box. If this packing and packaging guideline is not followed by the shipping party, the shipping party, and not KEMET, will be held responsible for any packaging, packing and/or product damages upon delivery of the products to the end customer. KEMET hereby disclaims any liability for damages to the products or otherwise that have been, or threaten to be, inflicted, result from or are in any way related to the packaging, packing or damage by the shipping party in contravention of the packing and packaging guidelines herein.

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