## Leaded Varistors VM Dual Function Automotive Grade 125°C



#### **Overview**

KEMET's VM series of dual function protective devices protect against voltage surges in an automotive voltage region and against radio frequency noise. This component replaces two components – a low voltage varistor and a capacitor.

KEMET's VM series incorporate a varistor function in automotive applications in a voltage region of 12 V, 24 V and 42 V and a function of a radio-frequency filtering capacitor in a high capacitance range from  $0.47 - 1.5 \mu$ F, making them ideal for protection in automobile electronic applications.

KEMET's VM series are square shaped components with inline leads and require at least 30% less mounting space.

## **Applications**

Typical applications include the protection against voltage transients and suppression of radio-frequency interference in 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
- Supply voltage of 12, 24, and 42 V
- Operating voltage of 16 56 VDC
- Capacitance range at 1 kHz of 0.47 1.5 μF
- · X7R capacitor temperature characteristics
- · Dimensional and weight savings on the board
- · RoHS 2 2011/65/EC, REACH compliant



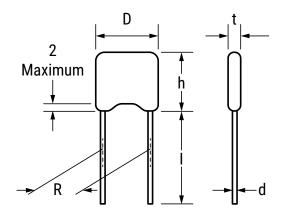


## **Ordering Information**

| VM  | 474                                  | М                             | K                                | 801                           | R  | 014  | P050                      |
|---|--------------------------------------|-------------------------------|----------------------------------|-------------------------------|--|--|---------------------------|
| Series  | Capacitance<br>Code (µF)             | Capacitance<br>Tolerance Code | Tolerance of<br>Varistor Voltage | Maximum Surge<br>Current Code | Packaging/<br>Lead Style                                       | Maximum Continuous<br>Working Voltage<br>(Vrms AC)   | Pitch Code                |
| Varistor Dual<br>Function<br>Leaded 125°C<br>Automotive<br>Grade Varistor/<br>Capacitor<br>(X7R Dielectric) | 474 = 0.47<br>105 = 1.0<br>155 = 1.5 | M = ±20%                      | K = ±10%                         | 801 = 800 A<br>122 = 1,200 A  | R = Bulk<br>/Straight<br>Lead<br>B = Reel<br>/Straight<br>Lead | <b>12 V Power Supply</b><br>014 = 14 Vrms AC<br>017 = 17 Vrms AC<br><b>24 V Power Supply</b><br>020 = 20 Vrms AC<br>030 = 30 Vrms AC<br><b>42 V Power Supply</b><br>040 = 40 Vrms AC | P050 = 5mm<br>P120 = 12mm |

Please contact your local Sales Representative for more information on available Part Numbers.

#### **Dimensions – Millimeters**



As per part number table.

## **Environmental Compliance**

RoHS 2 2011/65/EC, REACH



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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 indicted or that other measures may not be required.

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