

Safety Standard Recognized, 900 Series, Radial Disc, Encapsulated, X1 440 VAC / Y2 300 VAC (Industrial Grade)

Overview

KEMET's 900 Series Encapsulated Radial Through-Hole Ceramic Disc Capacitors are specifically designed for interference-suppression AC line filtering applications. Having internationally recognized safety certifications, these capacitors are well suited for applications that require keeping potentially disruptive or damaging line transients and EMI out of susceptible equipment. They are also an ideal solution when there is a need to suppress line disturbances at the source.

Safety Certified Capacitors are classified as either X and/or Y capacitors. Class X capacitors are primarily used in line-to-line (across-the-line) applications. In this application, there is no danger of electric shock to humans should the capacitor fail but it could result in a risk of fire. The Class Y capacitor is primarily used in line-to-ground (line by pass) applications. In this

application, failure of the capacitor could lead to danger of electric shock.

With a working voltage of 440 VAC in line-to-line (Class X) and 300 VAC in line-to-ground (Class Y) applications, these safety capacitors meet the impulse test criteria outlined in IEC Standard 60384. Meeting subclass X1 and Y2 requirements, these devices are certified to withstand impulses up to 4 KV (X1) and 5 KV (Y2) respectively. These encapsulated devices also meet the flame test requirements outlined in UL Standard 94 V-0.



Preliminary

Ordering Information

| C9 | 8 | 1 | U | 103 | M | Y | V | D | A | A | 7317 |
|----------------|---|---------------------------|---------------------|--|--|-------------------------------|---|-----------------------|---|--------------|---|
| Ceramic Series | Body Diameter | Lead Spacing ¹ | Specification | Capacitance Code (pF) | Capacitance Tolerance | Rated Voltage | Dielectric | Design | Lead Style | Failure Rate | Packaging/Grade (C-Spec) ¹ |
| C9 = C900 | 0 = 7.0 mm 1 = 8.0 mm 2 = 9.0 mm 3 = 10.0 mm 4 = 11.0 mm 5 = 12.0 mm 6 = 13.0 mm 8 = 15.0 mm | 7 = 7.5 mm 1 = 10.0 mm | U = Safety Standard | 2 significant digits + number of zeros. Use 9 for 1.0 – 9.9 pF Use 8 for 0.5 – 0.99 pF e.g., 2.2 pF = 229 e.g., 0.5 pF = 508 | C = ±0.25 pF D = ±0.5 pF J = ±5% K = ±10% M = ±10% | Z = X1 440 VAC/ Y2 300 VAC | N = NP0 (0 ±60 ppm/°C) S = SL (-1,000~+350 ppm/°C) Y = Y5P (±10%) W = Y5U (+20% to -55%) V = Y5V (+30% to -80%) | D = Single Layer Disc | A = Straight B = Vertical Kink C = Outside Kink | A = N/A | 7317 = Ammo Pack WL35 = Bulk / 3.5 mm lead length WL40 = Bulk / 4.0 mm lead length WL45 = Bulk / 4.5 mm lead length WL20 = Bulk / 20 mm lead length |

¹ When choosing the Ammo Pack option, please note that the carrier tape pitch dimension is dependent upon the lead spacing dimension of the component. Carrier tape pitch dimensions are as follows:

15.0 mm for components with a 7.5 mm lead spacing dimension.

25.4 mm for components with a 10.0 mm lead spacing dimension.

Benefits

- Safety Standard Recognized
- Radial through-hole form factor
- Encapsulated
- 7.5 mm and 10 mm lead spacing
- Lead (Pb)-Free and RoHS Compliant
- Halogen Free
- Capacitance offerings ranging from 2.0 pF up to 10,000 pF
- Available capacitance tolerances of ± 0.25 pF, ± 0.5 pF, $\pm 5\%$, $\pm 10\%$, and $\pm 20\%$
- High reliability
- Kinked or straight lead configurations
- Non-polar device, minimizing installation concerns
- 100% pure matte tin-plated lead finish allowing for excellent solderability
- Encapsulation meets flammability standard UL 94 V-0

Applications

Typical applications include line-to-line (Class X) filtering, line-to-ground (Class Y) filtering, antenna coupling, primary and secondary coupling (switching power supplies), and line disturbances suppression (motors and motor controls, relays, switching power supplies, and inverters).

Preliminary