ASC Capacitors X363- .01-5-400

Instruction Manual

ASC Capacitors X363- .01-5-400 Polypro Metallized Capacitor

Model: X363- .01-5-400 | Brand: ASC Capacitors

1. Product Overview

The ASC Capacitors X363- .01-5-400 is a high-quality polypropylene metallized film capacitor designed for various electronic applications. This axial lead capacitor offers stable performance with a capacitance of 0.01 microfarads (uF) and a tolerance of 5%. It is rated for operation at 400 VDC and 270 VAC, making it suitable for both DC and AC circuits where reliable energy storage, filtering, or timing is required.

This image displays the ASC Capacitors X363- .01-5-400, an axial lead polypropylene metallized capacitor. It features a cylindrical body with leads extending from each end, designed for through-hole mounting in electronic circuits. Markings on the capacitor indicate its specifications, including capacitance, tolerance, and voltage ratings.

2. Setup and Installation

Proper installation is crucial for the safe and effective operation of the capacitor. Always ensure power is disconnected from the circuit before handling or installing electronic components.

- **Safety First:** Before beginning any installation, ensure that the power supply to the circuit is completely turned off and discharged. Verify with a multimeter if necessary.
- **Identify Leads:** The X363- .01-5-400 is an axial capacitor, meaning its leads extend from opposite ends of the cylindrical body. This type of capacitor is generally non-polarized, so the orientation of the leads in an AC

circuit does not typically matter. However, always refer to your circuit diagram for specific requirements.

- **Mounting:** Insert the capacitor leads into the designated holes on the printed circuit board (PCB) or connect them to the appropriate points in your circuit. Ensure a secure fit.
- **Soldering:** If soldering, use appropriate soldering techniques to create strong, reliable electrical connections. Avoid excessive heat that could damage the capacitor or surrounding components.
- **Clearance:** Ensure adequate clearance around the capacitor for proper ventilation and to prevent contact with other components that could cause short circuits.

3. Operating Principles

The X363- .01-5-400 capacitor functions as a passive electronic component within a circuit. It stores electrical energy in an electric field and can release it when needed. Its primary roles include:

- **Energy Storage:** Temporarily stores electrical charge, acting like a small, fast-responding battery.
- **Filtering:** Smooths out voltage fluctuations (ripple) in power supplies, allowing only the desired DC component to pass.
- **Coupling/Decoupling:** Blocks DC current while allowing AC signals to pass, or shunts unwanted AC noise to ground.
- **Timing:** Used in conjunction with resistors to create RC circuits for timing applications.

It is crucial to operate the capacitor within its specified voltage ratings (400 VDC / 270 VAC) to prevent damage and ensure longevity. Exceeding these limits can lead to component failure.

4. Maintenance

Polypropylene metallized film capacitors like the X363- .01-5-400 are generally maintenance-free components designed for long-term reliability. However, periodic visual inspection can help identify potential issues.

- **Visual Inspection:** Periodically inspect the capacitor for any signs of physical damage, such as cracks, bulges, discoloration, or damaged leads.
- **Environmental Conditions:** Ensure the operating environment remains within specified temperature and humidity ranges. Extreme conditions can degrade performance over time.
- **Cleanliness:** Keep the circuit board and components free from dust and debris, which can affect performance or lead to short circuits.

No routine electrical testing or recalibration is typically required for this type of capacitor.

5. Troubleshooting

If a circuit involving the X363- .01-5-400 capacitor is not functioning as expected, consider the following troubleshooting steps:

- **No Power:** Ensure the circuit has proper power supply and all connections are secure.
- **Incorrect Connections:** Double-check all wiring and soldering points against the circuit diagram to ensure correct installation.
- **Physical Damage:** Look for any visible signs of damage to the capacitor (e.g., cracks, burns, bulges). A damaged capacitor often indicates a fault.
- **Incorrect Value:** Verify that the correct capacitor value (0.01 uF) and voltage rating (400 VDC / 270 VAC) were used for the application.
- **Testing Capacitance:** If you suspect the capacitor is faulty, you can test its capacitance using a multimeter

with a capacitance measurement function. Compare the reading to the specified 0.01 uF.

- **Replacement:** If the capacitor is found to be faulty or damaged, it must be replaced with an identical or equivalent component to restore circuit functionality. Always replace with the power off.

6. Specifications

Specification	Value
Part Number	X363- .01-5-400
Brand	ASC Capacitors
Capacitance	0.01 uF
Capacitance Tolerance	5%
Rated Voltage (DC)	400 VDC
Rated Voltage (AC)	270 VAC
Material	Polypropylene Metallized Film
Shape	Round (Axial)
Manufacturer	ASC Capacitors
ASIN	B00DWI1SM6
Date First Available	January 19, 2016

7. Warranty Information

Specific warranty terms for the ASC Capacitors X363- .01-5-400 are typically provided by the manufacturer or the seller at the time of purchase. Please refer to your purchase documentation, invoice, or the official ASC Capacitors website for detailed warranty coverage, duration, and conditions. Keep your proof of purchase for any warranty claims.

8. Technical Support

For technical assistance, detailed product inquiries, or support regarding the ASC Capacitors X363- .01-5-400, please contact the manufacturer directly or the authorized seller from whom you purchased the component.

- **Manufacturer Contact:** Visit the official ASC Capacitors website for contact information, technical datasheets, and support resources.
- **Seller Support:** If purchased from a distributor or retailer, their customer service or technical support department may be able to assist.

When contacting support, please have the product model number (X363- .01-5-400) and any relevant circuit diagrams or application details ready.