

NEW SV SERIES CAPACITOR ASSEMBLIES: THE PERFECT FIT FOR POWER SUPPLY FILTERING



In general, a capacitor assembly attaches multiple capacitors together into a single subassembly. This approach results in increased electrical performance such as higher voltages, higher capacitance, or higher power, while also simplifying manufacturing assembly and providing a significant reduction in board space needed.



The SV Series capacitor assembly is built as a vertically stacked ceramic capacitor, which reduces the overall footprint of the circuit board. SV Series capacitor assemblies are available in the X7R dielectric with a high capacitance-to-volume ratio.



At Knowles Precision Devices, we have a heritage of designing high-reliability capacitor assemblies using our patented Cap-Rack technology. Cap-Rack capacitor assemblies bond chips of the same size using a high-temperature epoxy, resulting in a chip that has high capacitance in a small footprint.

We recently expanded our capacitor assembly offering with the release of the SV Series capacitor assembly that can reach the capacitance required in power supply filtering applications. More specifically, the SV Series capacitor assembly is built as a vertically stacked ceramic capacitor, which reduces the overall footprint of the circuit board. SV Series capacitor assemblies are available in the X7R dielectric with a high capacitance-to-volume ratio.

Additionally, low equivalent series resistance (ESR) and low equivalent series inductance (ESL) are inherent in the SV Series design, which gives the assemblies the capability to handle high ripple currents at high frequencies. Since ripple current can cause self-heating (I²R) losses and degradation in a capacitor, reducing ESR helps minimize these impacts, resulting in less power loss and improved reliability. Together, these qualities make the SV Series ideally suited for the input and output stages of switch mode power supplies and DC-DC converters.

The new SV Series capacitor assemblies offer far superior performance compared to aluminum or tantalum electrolytic capacitors for power filtering applications. The assemblies can be made with up to ten chips of the same size with various lead configurations to safeguard against thermal and mechanical stresses. Finally, SV Series capacitor assemblies are 100 percent tested for dielectric withstanding voltage, insulation resistance, capacitance, and dissipation factor.

Learn why our new SV Series capacitor assemblies are perfect for your power supply filtering needs.

[Learn More](#)

If you need help, please contact us and we can guide you through the process.



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