North American Power!

# High Capacitance Leaded Ceramic Capacitors

## Introduction:

JOHANSON introduces its comprehensive line of North American-manufactured high-power/voltage leaded capacitors, specifically designed for high-frequency switching power supply applications and critical electronic systems.

As an American-owned company with ISO 14001:2015 and AS9100:2016 certifications, JOHANSON maintains manufacturing locations in both **USA** and **Mexico**.

These capacitors feature optimized equivalent series resistance (ESR), and equivalent series (ESL) characteristics, ensuring superior performance in demanding applications from aerospace to medical equipment.

| Product Line | Capacitance Range | Voltage Rating | Additional Info |
|---|---|---|---|
| High-Power/Voltage Stacked Capacitors for SMPS | 0.5–800 µF | 50–500 VDC | SMPS Switch-Mode Stacked Capacitors |
| High-Power/Voltage Radial Capacitors | 100 pF–70 µF | 25–5000 VDC | Switchmode Radial Leaed Capacitors (H-Series) |
| High-Power/Voltage Mini-Switchmode® Capacitors | 18 nF–10 µF | 25–500 VDC | Mini-Switchmode® Capacitors |
| High-Power/Voltage Radial T-Series (200°C) Capacitors | 56 pF–12 µF | 25–4000 VDC | Radial T-Series Capacitors |

## Typical Applications:

Johanson's high-power/voltage leaded capacitors are ideal for use in various high-reliability applications, including:

### 1) Mini-Switchmode® High-Power/Voltage Capacitors in Aerospace & Defense

Capacitors designed for essentail, reliable and compact performance under extrerme temperature and enviormental conditions.

P/N **M3DV631W664K1J1001B**

Mini-Switchmode® High-Power/Voltage Capacitors are essential in aerospace and defense applications for filtering out high-frequency noise in control systems and power conditioning circuits. Johanson's **M3DV631W664K1J1001B**, featuring a capacitance of 0.66 µF and a voltage rating of 630 VDC, is specifically engineered for harsh aerospace environments. With an EIA size of 1825 (0.182 inches × 0.25 inches), this component ensures compact yet reliable performance. Designed for durability, these capacitors perform efficiently under extreme temperature and environmental conditions, making them ideal for avionics systems, power inverters, and satellite communication applications.

## 2) 200°C Rated Radial, High-Power/Voltage Capacitors in Energy & Drilling

Capacitors designed for drilling industries and built to handle the harshest environments.

P/N: **HPJJ202G124J3QA001C**

**High-Power Radial Capacitors** play a crucial role in energy and drilling industries, particularly for signal conditioning circuits in drilling equipment. Johanson's **HPJJ202G124J3QA001C** offers a capacitance of 0.66 µF and a voltage rating of 2000 VDC. With the ability to operate at temperatures as high as 200°C and an EIA size of 6964 (0.696 inches × 0.64 inches), this capacitor is built to handle the harshest environments. Its rugged construction and exceptional stability make it a dependable choice for deep drilling operations, power distribution systems, and renewable energy equipment.

## 3) SMPS High-Power/Voltage Capacitors in Commercial Power

Capacitors designed for commercial power applications and compact performance for smoothing out high-frequency noise.

P/N **M1FP102G333K3L1001F**

**Stacked SMPS High-Power/Voltage Capacitors** are pivotal in commercial power applications for smoothing out high-frequency noise generated by switching processes in substations and charging systems.

Johanson's **M1FP102G333K3L1001F** is optimized for such needs, offering a capacitance of 33,000 pF and a voltage rating of 1000 VDC. With an EIA size of 3839 (0.38 inches × 0.39 inches), this capacitor ensures compact design without compromising performance. Built for high reliability, this component is suited for use in electric vehicle charging stations, substation switchgear, and commercial power converters.

## 4) Stacked SMPS High-Power/Voltage Capacitors in Power Supply & Medical

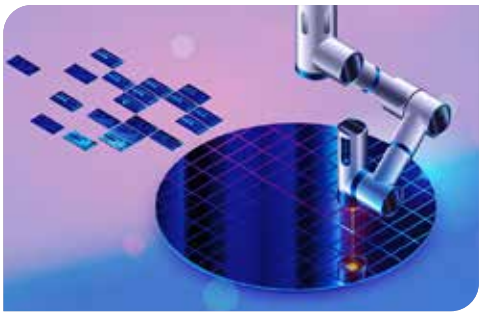
Capacitors designed for medical applications & compact performance for stable voltage output.

P/N **M2FP501W205K1SL001F**

Stable voltage output is critical in power supply and medical applications, where **Stacked SMPS High-Power/Voltage Capacitors** are often used to smooth out high-frequency noise generated by switching processes.

Johanson's **M2FP501W205K1SL001F** (2.0 µF, 500 VDC) provides high-performance power regulation with X7R ceramic material. Featuring an EIA size of 3839 (0.38 inches × 0.39 inches), this component offers a balance of compact size and robust performance, making it suitable for applications like MRI machines, X-ray systems, and precision power supplies.

## 5) Standard Radial High-Power Capacitors in Semiconductor Manufacturing



Capacitors designed for decoupling power supply lines from high-frequency noise in semiconductor manufacturing.
P/N **RLKD500W106K3QN001B**

**Standard Radial High-Power Capacitors** are instrumental in decoupling power supply lines from high-frequency noise in semiconductor manufacturing.

Johanson's **RLKD500W106K3QN001B** delivers a capacitance of 10.0 µF with a voltage rating of 50 VDC. With an EIA size of 7450 (0.745 inches × 0.50 inches), it is designed for high reliability and enhanced durability. The rugged epoxy coating provides additional protection against environmental factors, making it an excellent choice for cleanroom manufacturing equipment, plasma etching systems, and photolithography setups.

## 6) High-Power/Voltage Radial Capacitors in EV Testing

Capacitors designed for filtering, decoupling and stabilizing power supplies and compact performance in high-stress environments.
P/N **RLHP402W472K3QR003C**

EV Testing demands capacitors capable of filtering, decoupling, and stabilizing power supplies in high-stress environments.

Johanson's **High-Power/Voltage Radial Capacitors RLHP402W472K3QR003C**, with a capacitance of 4700 pF and a voltage rating of 4000 VDC, meets these rigorous requirements. Its EIA size of 5550 (0.55 inches × 0.50 inches) and RoHS compliance ensure that it fits seamlessly into advanced EV testing systems. Whether used in power analyzers, battery management systems, or charging infrastructure, this component offers exceptional reliability and performance.

### Key Features:

- North American Manufacturing
- High-power/voltage capacitors with capacitance values up to 800µF & voltage ratings up to 5000V DC
- Military applications johanson-military-aerospace-hirel-flyer.pdf
- Custom capabilities
- Operating temperature range: -55°C to +125°C and up to 200°C (T-Series only)
- Flexible mounting options with optimized leadframes

## Why Choose Johanson?

Our high-power/voltage leaded ceramic capacitors are manufactured in North America, offering geographical proximity and other trading advantages. The product line features intrinsically low ESR and ESL compared to electrolytic capacitors, while our flexible mounting options ensure reliable solder joints with reduced thermal stress. All products undergo rigorous in-house testing, including electrical, mechanical, and Hi-Rel testing (as required).

For general questions, contact Elvis Henriquez, Product Manager, ehenriquez@johansondielectrics.com

### Additional Resources & Links:

**Ask Technical Questions:** https://www.johansondielectrics.com/contact/ask-a-question/

**Quote Request:** https://www.johansondielectrics.com/contact/request-a-quote/

**Sample Request:** https://www.johansondielectrics.com/contact/request-a-sample/

**Product Catalog:** https://www.johansondielectrics.com/downloads/johanson-dielectrics-catalog/