

# Purchase of Tantalum Capacitors with Good Reputation

How reliable are tantalum capacitors?

Modern tantalum capacitors are very reliable if used properly. That includes having a series resistance of at least 0.1 to 3 ohms in the circuit, derating the voltage to about 60% maximum of the rated voltage and keeping the temperature to a reasonable value. They must never, even briefly, be exposed to any reverse voltage.

Where can I find tantalum capacitors for my integrated circuit?

Discover tantalum capacitors for your integrated circuit at CPC. We offer a variety of tantalum electrolytic capacitors, with voltage ratings from 6.3V to 50V, and providing capacitance from 0.1 micro-Farad to 220 micro-Farad.

Why is a tantalum capacitor more prone to breakdown than a polymer capacitor?

Solid Electrolytic Tantalum capacitors are more prone to failure and release larger amounts of heat at breakdown compared to Polymer Tantalum capacitors, due to resistant low manganese oxides in the fault sites in the dielectric. For the same amount of energy stored in the capacitor, this difference in heat release can lead to the failure mode in Solid Electrolytic Tantalum capacitors.

What is a tantalum capacitor used for?

Tantalum is used to create small sized capacitors with 'large' capacitance. Compared to other materials the oxide layer can be quite thin. So for all applications where PCB space is limited (e.g. mobile phones) they are the go to type of capacitor when ceramic doesn't cut it anymore. Also tantalum capacitors can be created with quite small ESR.

Why are solid electrolytic tantalum capacitors declining in general applications?

The decline in general applications of Solid Electrolytic Tantalum capacitors, including those where high reliability and environmental stability are most needed, is due to the loss in volumetric efficiency and the fear of ignition and burning tantalum failure mode. This issue now dominates online publications.

What happens if a tantalum capacitor is near a switched-mode power supply?

If a tantalum capacitor is close to a switched-mode power supply, its capacitance will rise slightly as the power supply comes under heavy load and heats up. Due to the piezoelectric effect, ceramic types of capacitors are microphonic as they vibrate, generating voltages like a piezo microphone.

This report lists the top Tantalum Capacitors companies based on the 2023 & 2024 market ...

Tantalum capacitors are widely used in electronic devices like cell phones, PCs, gaming consoles, car navigation systems, and audio gear. They perform exceptionally well in high-frequency and temperature

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conditions, ...

KEMET is the largest manufacture of tantalum capacitor in the world, it has a market share of 35.43% in value. KEMET Corporation, a subsidiary of Yageo Corporation (TAIEX: 2327), manufactures a broad selection of capacitor technologies such as tantalum, aluminum, multilayer ceramic, film, paper, polymer electrolytic, and supercapacitors. KEMET ...

Find your tantalum capacitor easily amongst the 38 products from the leading brands (TDK Electronics, PANASONIC, VISHAY, ...) on DirectIndustry, the industry specialist for your professional purchases.

Completion of the Blue River Transaction is subject to the conditions set forth in the Purchase Agreement, including, if required, acceptance by the TSX Venture Exchange. Blue River Project Highlights. Full size / Source o One of the world's leading ESG-focused tantalum and niobium projects. World's largest and low-cost potential near-term supplier of conflict-free ...

Browse our collection of thousands of tantalum electrolytic capacitors from manufacturers like ...

Our solid tantalum capacitors, featuring manganese dioxide (MnO<sub>2</sub>) cathodes, are available in metal hermetically sealed packages and molded cases, supporting axial, radial, and SMD configurations. Exxelia has led advancements in reducing equivalent series resistance (ESR) through the use of polymer cathodes.

Tantalum capacitors come in various types, each with specific characteristics and applications. Understanding the different types of tantalum capacitors helps in selecting the most suitable one for a given circuit design. Solid Tantalum Capacitors. Solid tantalum capacitors are the most common type of tantalum capacitor. They are constructed ...

Tantalum caps have a reputation for spontaneously shorting out and exploding. As well, they don't sound very good when used in the audio path. In my career as an electronics tech working on medical and industrial equipment I never found a defective tantalum capacitor other than a few that were installed backwards. I think that the reason for ...

Tantalum capacitors are a subtype of electrolytic capacitors that use tantalum metal for the anode. Tantalum capacitors have superior frequency characteristics and long-term stability. They are known for their virtually unlimited shelf-life and their high capacitance density and reliability. Tantalum capacitors are available in both wet (foil) and dry (solid) electrolytic ...

Axial, radial and SMD tantalum capacitor types. Tantalum capacitors come in various styles to cater to diverse needs of today's electronic designs. Common configurations include surface mount device (SMD) chips, stacked smd chips, radial, and axial designs. SMD tantalum capacitors are compact and suitable for automated assembly processes ...

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Tantalum capacitors use tantalum pentoxide as the dielectric, while ceramic capacitors use a ceramic material, typically composed of metal oxides. 2. Capacitance Range: Tantalum capacitors generally offer higher capacitance values in a smaller package compared to ceramic capacitors. This makes them ideal for applications requiring high capacitance in ...

Manufacturer C is a well-known producer of tantalum capacitors with a strong reputation for quality and reliability. They offer a wide range of products, including surface mount and through-hole capacitors, for various applications.

Our solid tantalum capacitors, featuring manganese dioxide (MnO<sub>2</sub>) cathodes, are available in ...

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Because of their superior high-frequency and temperature characteristics compared to aluminum capacitors, tantalum capacitors are used in smoothing circuits for switching power supplies that turn current on and off at high ...

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