

# Nominal capacity of direct-insertion tantalum capacitors

What is a tantalum capacitor?

The tantalum capacitor, because of its very thin and relatively high permittivity dielectric layer, distinguishes itself from other conventional and electrolytic capacitors in having high capacitance per volume (high volumetric efficiency) and lower weight. Tantalum is a conflict resource.

Are tantalum electrolytic capacitors SMD?

More than 90% of all tantalum electrolytic capacitors are manufactured in SMD style as tantalum chip capacitors. It has contact surfaces on the end faces of the case and is manufactured in different sizes, typically following the EIA -535-BAAC standard. The different sizes can also be identified by case code letters.

What is the impedance of a tantalum electrolytic capacitor?

In data sheets of electrolytic capacitors, only the impedance magnitude  $|Z|$  is specified, and simply written as "Z". Regarding to the IEC/EN 60384-1 standard, the impedance values of tantalum electrolytic capacitors are measured and specified at 10 kHz or 100 kHz depending on the capacitance and voltage of the capacitor.

Can a tantalum electrolytic capacitor withstand a reverse voltage?

Nevertheless, tantalum electrolytic capacitors can withstand for short instants a reverse voltage for a limited number of cycles. The most common guidelines for tantalum reverse voltage are: 1% of rated voltage to a maximum of 0.1 V at 125 °C.

Are aluminum and tantalum electrolytic capacitors standardized?

The tests and requirements to be met by aluminum and tantalum electrolytic capacitors for use in electronic equipment for approval as standardized types are set out in the following sectional specifications: Tantalum capacitors are the main use of the element tantalum. Tantalum ore is one of the conflict minerals.

Why do tantalum electrolytic capacitors fail?

In solid tantalum electrolytic capacitors the heat generated by the ripple current influences the reliability of the capacitors. Exceeding the limit tends to result in catastrophic failures with shorts and burning components.

A tantalum capacitor uses tantalum metal as its anode and is a type of electrolytic capacitor. In electronic circuits, tantalum capacitors are widely used because of their ...

Energy Storage Tantalum Hybrid Capacitors - HTHC Specifications: 1. Operating Temperature Range: -55 ~ +125 °C. For the Derated Design please see guide line on page 2~4 2. Capacitance ...

Tantalum capacitors are designed with excellent performance characteristics for filtering, by-passing, coupling,

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blocking and R,C tuning circuits. They are used extensively in industrial, ...

All tantalum shell, airtight, cylindrical, lead out in the same direction, polarized, 3 screws with 120° angle structure, easy to install. The product is a hybrid capacitor composed of tantalum ...

High Capacitance High Voltage Tantalum Capacitors: Extended range of forming voltage to 300~400V. Key applications in aviation/aerospace, automotive, transportation, medicine & more. ... a nominal ...

Solid Tantalum Surface Mount Chip Capacitors TANTAMOUNT™, Molded Case, High Performance Polymer Type PERFORMANCE / ELECTRICAL CHARACTERISTICS Operating ...

\*Usage precaution: Based on JEITA Technical Report "EIAJ RCR-2368A" M case: 1608-10 (0603) size M case 1608-10 (0603) size

Tantalum Capacitors are available at Mouser Electronics from industry leading manufacturers. Mouser is an authorized distributor for tantalum capacitor manufacturers including KEMET, ...

Polar tantalum capacitors with solid electrolyte Conventional TaMnO<sub>2</sub> technology Flame-retardant plastic case (UL 94 V-0) Optionally tinned or gold-plated terminals Features Ultra-high ...

View Tantalum Capacitors Product Guide by Vishay Polytech datasheet for technical specifications, dimensions and more at DigiKey.

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