

# Tantalum Capacitors - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2024 - 2029)

<https://marketpublishers.com/r/T51C289AF714EN.html>

Date: July 2024

Pages: 103

Price: US\$ 4,750.00 (Single User License)

ID: T51C289AF714EN

## Abstracts

The Tantalum Capacitors Market size is estimated at USD 1.31 billion in 2024, and is expected to reach USD 1.62 billion by 2029, growing at a CAGR of 4.27% during the forecast period (2024-2029).

Tantalum capacitors are electrolytic capacitors that use tantalum metal for the anode. They are polarized capacitors with higher frequency and resilience characteristics. They are smaller than aluminum electrolytic capacitors of the same capacitance. The voltage range rating for tantalum capacitors varies from 2 V to more than 500 V.

### Key Highlights

Tantalum capacitors are used across multiple end-user applications such as medical devices, consumer electronics, automotive, and industrial. Tantalum capacitors are commonly used in various electronic applications, including PCs, laptops, medical devices, audio amplifiers, automotive circuitry, smartphones, digital cameras, portable media players, and other surface-mounted devices (SMD).

According to TME Electronic Components, in November 2023, tantalum capacitors boast a significant number of advantages and thus can be used in many different applications. They can also be used to replace or support aluminum electrolytic capacitors and MLCCs. One of the essential features of tantalum capacitors is their stability of parameters over a wide range of temperatures - capacitance is stable in temperature ranges from -55°C to 125°C.

Tantalum capacitors do not age, so they retain their parameters for many years. Tantalum capacitors also feature high volumetric efficiency. For instance, standard SMD

aluminum electrolytic capacitors have a volumetric efficiency of 11.8  $\mu\text{FV}/\text{mm}^3$ , whereas tantalum capacitors attain an efficiency of 63  $\mu\text{FV}/\text{mm}^3$  and above.

The market may face a significant challenge due to the fluctuating prices of tantalum ore, the primary raw material used to produce tantalum capacitors. The prices of tantalum capacitors are subject to change based on various factors, including geopolitical tensions, demand changes from multiple industries, disruption in the supply chain, and specific laws and regulations on the sourcing of material.

The market is experiencing continued growth driven by the expanding consumer electronics sector, the advancing market for electronic gadgets, and the growing prevalence of advanced technologies like 5G. In addition, the automotive industry's transition toward electric vehicles and the rise of IoT devices further contribute to the market's growth. As manufacturers focus on developing smaller, efficient capacitors, the market is poised for sustained growth, pushed by ongoing technological innovations and rising electronic integration across industries.

## Tantalum Capacitors Market Trends

### Consumer Electronics Segment to Witness Major Growth

Tantalum capacitors are commonly used in various consumer electronic devices, including smartphones. These capacitors are often used as the capacitors connected to the power line of the Power Amplifier (PA) for GSM on smartphones. Tantalum capacitors are small in size, making them suitable for use in small-footprint applications like smartphones.

According to Ericsson, the global number of smartphone subscriptions reached over 6.6 billion in 2022. It is expected to hit 7.8 billion by 2028. The countries with the most smartphone mobile network subscriptions are the United States, China, and India. Such a huge rise in smartphones would drive the market.

Tantalum capacitors are also used in laptops and other electronic devices. For example, researchers demonstrated that about 1 gram of tantalum is used per unit in laptops, specifically in motherboard power supply filters. This is because tantalum capacitors offer higher capacitance values than MLCC capacitors and display no microphonic effect, making them an attractive option for devices with flat or compact designs.

With smartphones supporting 5G becoming more widespread and devices like wearable

devices becoming increasingly multifunctional and compact, the need for smaller, higher-density electronic circuitry is increasing. Moreover, as 5G is rapidly growing, the need for a tantalum capacitor increases. Replacing solid capacitors with wet tantalum capacitors will likely present an opportunity soon.

According to recent data released by GSMA Intelligence, 5G connections will account for more than half (51%) of all mobile connections by 2029. This percentage is expected to increase further to 56% by the end of the decade, solidifying 5G as the leading technology for connectivity. This number is anticipated to reach 1.6 billion connections by the end of 2023 and 5.5 billion by 2030. The tantalum capacitors support the effective functioning of network equipment, enhancing the speed of data transmission and strengthening connectivity, ultimately propelling the growth of the tantalum capacitors market.

### Asia-Pacific to Witness Significant Growth

As the Asia-Pacific region embraces the transition towards cleaner energy sources and strives to reduce carbon emissions, the demand for electric vehicles has increased. Consequently, there is an increased need for tantalum capacitors to power these vehicles. In electric vehicle batteries, tantalum capacitors are crucial in improving energy efficiency, extending battery life, and enhancing overall performance.

Additionally, consumer electronics such as smartphones and other mobile devices drive further demand for tantalum capacitors in Asia-Pacific. As consumers demand smaller, lighter, and more powerful devices, manufacturers turn to tantalum capacitors to meet these requirements.

The deployment of 5G technology in the Asia-Pacific region has fueled the demand for tantalum capacitors in telecommunication infrastructure. Tantalum capacitors play a vital role in 5G base stations, antennas, and other telecommunications equipment by facilitating efficient power management, filtering, and signal conditioning.

With the ongoing construction of the next generation of telecom networks, there is poised to be a surge in the utilization of tantalum capacitors in this application, spanning both the main circuit boards and the GaN RF power amplifier.

## Tantalum Capacitors Industry Overview

The tantalum capacitors market is semi-consolidated due to large vendors in the global market. The key players are involved in various strategies, such as acquisitions and partnerships, to improve their market share and enhance their profitability in the market. The key players in the market include Vishay Intertechnology Inc., Kemet Corporation (YAGEO Corporation), NIC Components Corp., KYOCERA AVX Components Corporation (KYOCERA CORPORATION), Semec Technology Company Limited.

In March 2024, Kemet introduced the brand-new T581 polymer tantalum surface-mount capacitors that satisfy the requirements of Military Performance Specification Sheets MIL-PRF-32700/2. This launch signifies the introduction of polymer tantalum surface-mount capacitors to the market, making them the first to meet the new specifications. This further solidifies KEMET's position as a key firm in the defense and aerospace high-reliability application market.

In November 2023, Vishay Intertechnology Inc. announced that it entered a definitive agreement with Nexperia BV to purchase Nexperia's wafer fabrication plant and operations in the United Kingdom for approximately USD 177 million in cash (subject to customary post-sale adjustments).

Additional Benefits:

The market estimate (ME) sheet in Excel format

3 months of analyst support

## Contents

### **1 INTRODUCTION**

- 1.1 Study Assumptions and Market Definition
- 1.2 Scope of the Study

### **2 RESEARCH METHODOLOGY**

### **3 EXECUTIVE SUMMARY**

### **4 MARKET INSIGHTS**

- 4.1 Market Overview
- 4.2 Industry Attractiveness - Porter's Five Forces Analysis
- 4.3 Value Chain Analysis
- 4.4 Assessment of Macroeconomic Trends on the Market

### **5 MARKET DYNAMICS**

- 5.1 Market Drivers
  - 5.1.1 Growing Focus on Miniaturization of Devices
  - 5.1.2 Rising In-vehicle Electronics
- 5.2 Market Restrains
  - 5.2.1 Fluctuations in the Price of Tantalum ore

### **6 MARKET SEGMENTATION**

- 6.1 By Application
  - 6.1.1 Medical Devices
  - 6.1.2 Consumer Electronics
  - 6.1.3 Automotive
  - 6.1.4 Industrial
  - 6.1.5 Other Applications
- 6.2 By Geography\*\*\*
  - 6.2.1 Americas
  - 6.2.2 Europe, Middle East and Africa
  - 6.2.3 Asia
  - 6.2.4 Australia and New Zealand

6.2.5 Japan

6.2.6 South Korea

## **7 COMPETITIVE LANDSCAPE**

### **7.1 Company Profiles\***

7.1.1 Vishay Intertechnology Inc.

7.1.2 Kemet Corporation (YAGEO Corporation)

7.1.3 NIC Components Corp.

7.1.4 KYOCERA AVX Components Corporation (KYOCERA CORPORATION)

7.1.5 Semec Technology Company Limited

7.1.6 Samsung Electro-Mechanics

7.1.7 Exxelia Group

7.1.8 Abracon LLC

7.1.9 Panasonic Corporation

7.1.10 NTE Electronics Inc.

## **8 INVESTMENT ANALYSIS**

## **9 FUTURE OUTLOOK OF THE MARKET**

## I would like to order

Product name: Tantalum Capacitors - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2024 - 2029)

Product link: <https://marketpublishers.com/r/T51C289AF714EN.html>

Price: US\$ 4,750.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

[info@marketpublishers.com](mailto:info@marketpublishers.com)

## Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/T51C289AF714EN.html>

To pay by Wire Transfer, please, fill in your contact details in the form below:

First name:  
Last name:  
Email:  
Company:  
Address:  
City:  
Zip code:  
Country:  
Tel:  
Fax:  
Your message:

**\*\*All fields are required**

Customer signature \_\_\_\_\_

Please, note that by ordering from marketpublishers.com you are agreeing to our Terms & Conditions at <https://marketpublishers.com/docs/terms.html>

To place an order via fax simply print this form, fill in the information below and fax the completed form to +44 20 7900 3970

