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# Vishay’s Tantalum Division Offers Off the Shelf and Custom Arrays for Increased Capacitance and Voltage Capability

Vishay offers a variety of off the shelf arrays when the need arises for higher capacitance and / or voltages than discrete capacitors can provide. Even though tantalum has the highest C / V volumetric efficiency of any capacitor technology, these arrays can boost energy storage to the next level. Additionally, Vishay also offers custom array services and has been doing so for decades. In most cases, these custom arrays use wet tantalum technology, although solid tantalum and polymer technologies are used as well.

Arrays are used in a variety of applications. In harsh environments like those found in aerospace, military, and space markets (AMS), added screening is available to ensure long-term reliability. That said, these modules can be used whenever the need arises for a more densely integrated solution than discrete capacitors can provide.

A single wet tantalum capacitor has a typical working voltage of up to 125 V and can have a capacitance of up to approximately 90 mF at lower voltages. However, an array containing multiple single capacitors makes capacitance and voltage virtually limitless. In addition, these custom solutions can contain multiple balancing resistors and reverse bias protection circuitry. They can also have multiple inputs and outputs, with a variety of termination configurations offered, and can be custom-tested, both electrically and mechanically.

Solutions can be designed for board-mounted applications or with mechanical housings for off-board applications, saving valuable real estate in PCB designs.

## Key Advantages

- Customized electrical requirements such as ESR, DC leakage, and surge testing
- Customized mechanical requirements such as shock, vibration, and temperature cycling
- Wide choice of termination options (standard lead wires, screw terminations, solder cups, etc.)
- Additional circuitry options from within the body of the array

## Useful Links

- 285D product page [www.vishay.com/ppg?40028](http://www.vishay.com/ppg?40028)
- 200D, 202D product page [www.vishay.com/ppg?40027](http://www.vishay.com/ppg?40027)
- Array Design Guide [www.vishay.com/doc?49079](http://www.vishay.com/doc?49079)

Contact Information		
<p><b>The Americas</b></p> <p><b>David Bellomy</b> <a href="mailto:david.bellomy@vishay.com">david.bellomy@vishay.com</a></p>	<p><b>Europe</b></p> <p><b>Thomas Poessnecker</b> <a href="mailto:thomas.poessnecker@vishay.com">thomas.poessnecker@vishay.com</a></p>	<p><b>Asia / Pacific</b></p> <p><b>Jackson Ku</b> <a href="mailto:jackson.ku@vishay.com">jackson.ku@vishay.com</a></p>