TM8 Series SMD Tantalum Capacitors in Multi-Array Packaging for Medical Implantable Devices

As the medical industry moves to smaller, more compact portable devices, components like tantalum capacitors need to get smaller as well. However, reductions in capacitor size can result in products with more DC leakage problems due to material imperfections. The TM8 series uses innovative multi-array packaging (MAP) technology to provide increased volumetric efficiency, which results in a more robust tantalum design.

DC leakage, inherent in all capacitors, is most important to control in portable, battery-powered electronics in order to minimize battery drain. With its MAP packaging, the TM8 series provides a significant reduction in DC leakage.

Parameter	Commercial grade	TM8 medical grade
ESR	Datasheet	Datasheet | custom
DCL	0.01 CV	0.005 CV | custom
Established reliability	None	Weibull B (0.1 % failure rate)
QA testing	Standard	Functional test
Retention records	None	Yes
Packaging type	SMD – lead frame / MAP	SMD – lead frameless molded

Additional Key Advantages

- Ultra low DC leakage of 0.005 CV or lower
- Small case sizes: K (0402) and M (0603)
- Surge current options available: A, B, and Z
- Hot DCL option available
- Reliability level B available (0.1 % Weibull failure rate level)

Useful Links

- TM8 Product Page www.vishay.com/ppg?40133
- FIT Calculator www.vishay.com/dt/capacitors/tantalum-reliability-calculator-list/
- VITA_SPICE Simulation www.vishay.com/capacitors/vita-spice/

Contact Information

The Americas	Europe	Asia / Pacific
David Bellomy David.Bellomy@vishay.com	**Thomas Poessnecker** Thomas.Poessnecker@vishay.com	**BH Tan** Boonhooi.Tan@vishay.com

© 2022 VISHAY INTERTECHNOLOGY, INC. ALL RIGHTS RESERVED.

THIS DOCUMENT IS SUBJECT TO CHANGE WITHOUT NOTICE. THE PRODUCTS DESCRIBED HEREIN AND THIS DOCUMENT ARE SUBJECT TO SPECIFIC DISCLAIMERS, SET FORTH AT www.vishay.com/doc?91000