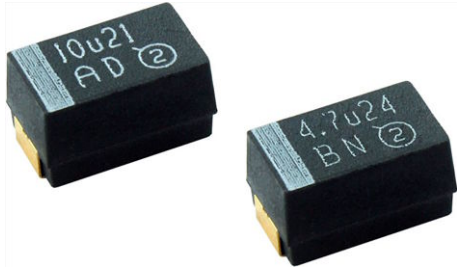


# Solid Tantalum Surface Mount Chip Capacitors TANTAMOUNT<sup>®</sup>, Molded Case, HI-TMP<sup>®</sup>, Very High Temperature 200 °C


**FEATURES**

- Operating temperature up to + 200 °C
- Application voltage: 21 V/24 V at + 200 °C
- 500 h continuous operation at  $V_R$
- Gold plated terminations
- 100 % surge current tested
- Standard EIA 535BAAC case size (E)
- Moisture sensitivity level 1
- Material categorization: For definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)


**RoHS  
COMPLIANT**
**PERFORMANCE/ELECTRICAL  
CHARACTERISTICS**
**Operating Temperature:** - 55 °C to + 200 °C

**Capacitance Range:** 4.7  $\mu$ F, 10  $\mu$ F

**Capacitance Tolerance:**  $\pm$  10 %,  $\pm$  20 %

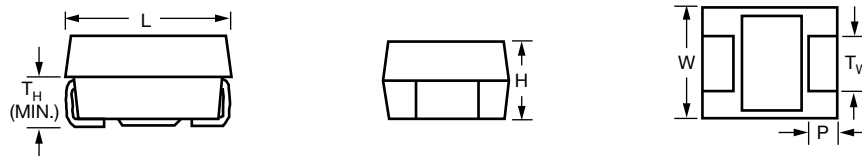
**Voltage Rating:** 21  $V_{DC}$ , 24  $V_{DC}$ 
**APPLICATIONS**

- Oil and petroleum
- High temperature sensing and drilling systems
- Industrial
- Safety critical industrial tools and products
- High temperature extended activities
- High temperature engines
- Electronic sensors

**ORDERING INFORMATION**

TH5	E	106	K	021	B	1000
TYPE	CASE CODE	CAPACITANCE	CAPACITANCE TOLERANCE	APPLICATION VOLTAGE AT + 200 °C	TERMINATION/PACKAGING	ESR
	See Ratings and Case Codes table	This is expressed in picofarads. The first two digits are the significant figures. The third is the number of zeros to follow.	K = $\pm$ 10 % M = $\pm$ 20 %	This is expressed in V. To complete the three-digit block, zeros precede the voltage rating.	A = Gold/ 7" (178 mm) reels B = Gold/ 13" (330 mm), reels Other <sup>(1)</sup>	Maximum 100 kHz ESR 0500 = 500 $\Omega$ 5000 = 5 $\Omega$ 10R0 = 10.0 $\Omega$

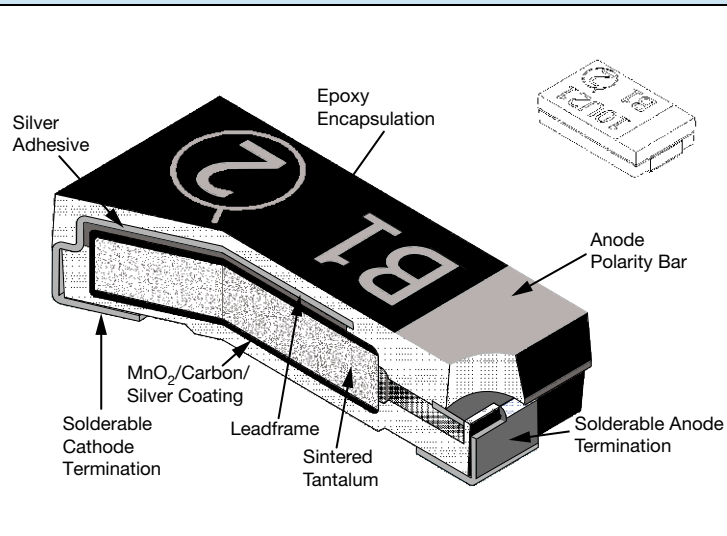
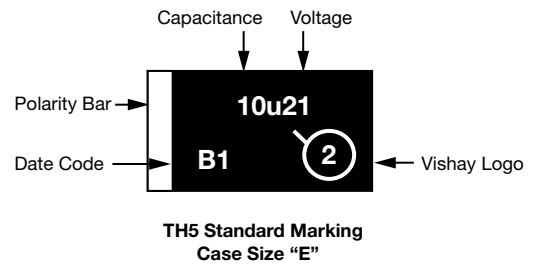
**Note**
<sup>(1)</sup> Other termination on request

**DIMENSIONS** in inches [millimeters]


CASE CODE	EIA SIZE	L	W	H	P	$T_w$	$T_H$ (MIN.)
E	7343-43	0.287 $\pm$ 0.012 [7.3 $\pm$ 0.30]	0.170 $\pm$ 0.012 [4.3 $\pm$ 0.30]	0.158 $\pm$ 0.012 [4.0 $\pm$ 0.30]	0.051 $\pm$ 0.012 [1.3 $\pm$ 0.30]	0.095 $\pm$ 0.004 [2.4 $\pm$ 0.10]	0.039 [1.0]

**Note**

- TH5 series, 21 V/24 V capacitors have been designed for, and tested at, 21 V/24 V at + 200 °C for 500 h. As with all Tantalum capacitors, reliability and life may be extended by lower applied voltage.

**CONSTRUCTION AND MARKING**

**Gold Termination**

**Marking:**

Capacitor marking includes an anode (+) polarity band, capacitance in microfarads and the voltage rating.

The Vishay Sprague® trademark is included if space permits. A manufacturing date code is marked on all capacitors. Call the factory for further explanation.

**STANDARD RATINGS**

CAPACITANCE (μF)	CASE CODE	PART NUMBER	MAX. DC LEAKAGE AT + 25 °C (μA)	TYPICAL DC LEAKAGE AT + 200 °C (μA)	MAX. DF AT + 25 °C (%)	MAX. ESR AT + 25 °C 100 kHz (Ω)	MAX. RIPPLE 100 kHz I <sub>RMS</sub> (A)
<b>21 V<sub>DC</sub> AT + 200 °C</b>							
10	E	TH5E106(1)021(2)1000	2.1	120	6	1.000	0.41
10	E	TH5E106(1)021(2)0500	2.1	120	6	0.500	0.57
<b>24 V<sub>DC</sub> AT + 200 °C</b>							
4.7	E	TH5E475(1)024(2)2500	1.1	60	6	2.500	0.26

**Note**

- Part number definitions:
  - Capacitance tolerance codes: K, M
  - Terminations and packaging: A, B

**Note**

- TH5 series, 21 V/24 V capacitors have been designed for, and tested at, 21 V/24 V at + 200 °C for 500 h. As with all Tantalum capacitors, reliability and life may be extended by lower applied voltage.



## Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay's knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and/or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Except as expressly indicated in writing, Vishay products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the Vishay product could result in personal injury or death. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.

## Material Category Policy

**Vishay Intertechnology, Inc. hereby certifies that all its products that are identified as RoHS-Compliant fulfill the definitions and restrictions defined under Directive 2011/65/EU of The European Parliament and of the Council of June 8, 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment (EEE) - recast, unless otherwise specified as non-compliant.**

**Please note that some Vishay documentation may still make reference to RoHS Directive 2002/95/EC. We confirm that all the products identified as being compliant to Directive 2002/95/EC conform to Directive 2011/65/EU.**

**Vishay Intertechnology, Inc. hereby certifies that all its products that are identified as Halogen-Free follow Halogen-Free requirements as per JEDEC JS709A standards. Please note that some Vishay documentation may still make reference to the IEC 61249-2-21 definition. We confirm that all the products identified as being compliant to IEC 61249-2-21 conform to JEDEC JS709A standards.**