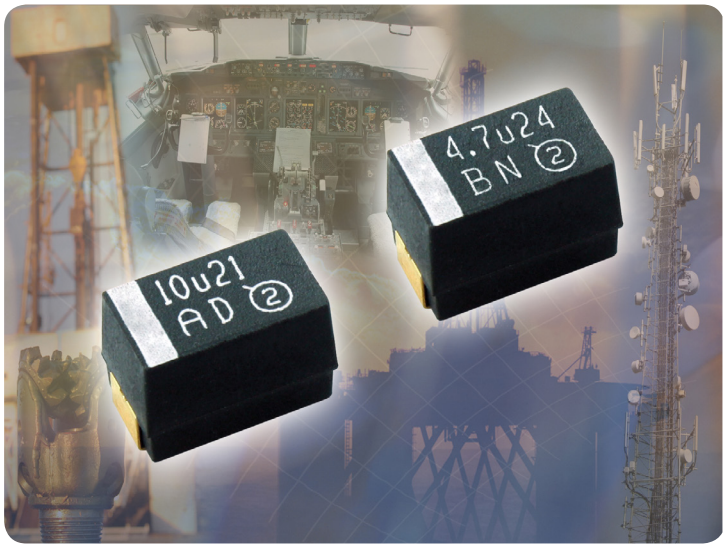
TH5 - HI TMP® Solid Tantalum Surface-Mount Capacitors



KEY BENEFITS

- Application voltage: 21 V and 24 V at + 200 °C (no further voltage derating required)
- Capacitance value: 10 µF at 21 V and 4.7 µF at 24 V
- 500 h continuous operation at + 200 °C
- 100 % surge current tested
- High reliability
- EIA 7343-43 molded package
- Gold-plated terminations

APPLICATIONS

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

RESOURCES

- Datasheet: http://www.vishay.com/doc?40146
- Tantalum product portfolio: http://www.vishay.com/capacitors/tantalum/
- Reliability calculator: http://www.vishay.com/capacitors/tantalum/capacitors/tantalum/tantalum-wet/tantalum-reliability-calculator-list/
- Technical questions: contact tantalum@vishay.com
- Sales contacts: http://www.vishay.com/doc?99914
- Material categorization: For definitions of compliance please see http://www.vishay.com/doc?99912

Pb-free
RoHS COMPLIANT

One of the World's Largest Manufacturers of
Discrete Semiconductors and Passive Components

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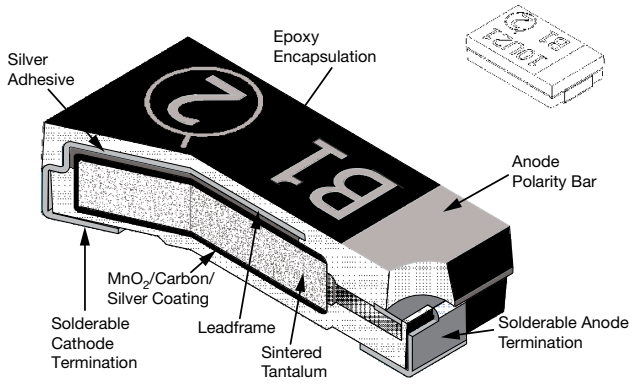
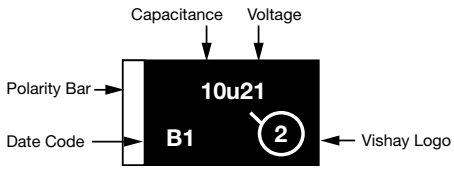
CAPACITORS

TH5 Tantalum

CONSTRUCTION AND MARKING



Gold Termination



TH5 Standard Marking Case Size "E"

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_{RMS} (A)
21 V_{DC} AT + 200 °C							
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
24 V_{DC} AT + 200 °C							
4.7	E	TH5E475(1)024(2)2500	1.1	60	6	2.500	0.26

Note

- Part number definitions: (1) Capacitance tolerance codes: K, M (2) Terminations and packaging: A, B, G, Q

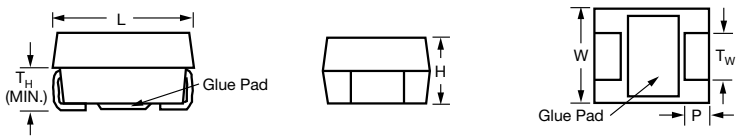
ORDERING INFORMATION

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 = ± 10 % M = ± 20 %	This is expressed in V. To complete the three-digit block, zeros precede the voltage rating.	A = Gold/ 7" (178 mm) reel B = Gold/ 13" (330 mm), reel G = Gold/ 7" (178 mm), ½ reel Q = Gold/ 7" (330 mm), partial reel Other (1)	Maximum 100 kHz ESR 0500 = 500 mΩ 5000 = 5 Ω 10R0 = 10.0 Ω

Note

(1) 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 ± 0.012 [7.3 ± 0.30]	0.170 ± 0.012 [4.3 ± 0.30]	0.158 ± 0.012 [4.0 ± 0.30]	0.051 ± 0.012 [1.3 ± 0.30]	0.095 ± 0.004 [2.4 ± 0.10]	0.039 [1.0]

Note

- Glue pad (non-conductive, part of molded case) is dedicated for glue attachment (as user option).
- 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.

View complete datasheet: http://www.vishay.com/doc?40146

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