



# WET TANTALUM CAPACITOR

HE3/DSCC 10011

**Ultra-High Cap Range of  
1100  $\mu$ F to 72 000  $\mu$ F**



## Wet Tantalum High-Energy Capacitor

### FEATURES

- Capacitance range: 1100  $\mu$ F to 72 000  $\mu$ F
- Low ESR: 0.035  $\Omega$
- Ripple current capability: up to 16 A
- Utilizes proven SuperTan<sup>®</sup> hybrid technology
- Withstands high stress and hazardous environments

### APPLICATIONS

- Airborne radar
- Military
- Weapons systems
- Pulse power devices

Datasheet is available on our web site at [www.vishay.com](http://www.vishay.com)  
for HE3 - <http://www.vishay.com/doc?42089>,  
DSCC 10011 - <http://www.vishay.com/doc?40141>

## Wet Tantalum Capacitors Tantalum-Case with Glass-to-Tantalum Hermetic Seal for - 55 °C to + 125 °C Operation

### FEATURES

Vishay HE3/DSCC 10011 represents a major breakthrough in wet tantalum capacitor technology for high-energy applications. The unique case design provides for the highest capacitance per unit volume. The HE3/DSCC 10011 also utilizes the proven hybrid technology of our SuperTan® product.

The HE3/DSCC 10011 is housed in an all tantalum, hermetically sealed case, and is manufactured to withstand high stress and hazardous environments. The design provides a unique double seal for improved reliability and performance.

- Compliant to RoHS directive 2002/95/EC

### PERFORMANCE CHARACTERISTICS

**Operating Temperature:**  
- 55 °C to + 85 °C (to + 125 °C with voltage derating)

**Capacitance Tolerance:**  
At 120 Hz, + 25 °C ± 20 % standard  
± 10 % available as special

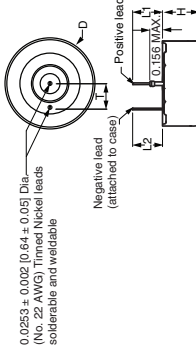
**Contact Marketing for Availability of 10 % Tolerance**



RoHS COMPLIANT



### DIMENSIONS in inches [millimeters]



| CASE CODE | D               | HEIGHT        | L2 (MIN.) | L1 (MIN.) | T             | WEIGHT (g) (TYPICAL) |
|-----------|-----------------|---------------|-----------|-----------|---------------|----------------------|
| A         | 1.400 ± 0.005   | 0.350 ± 0.015 | 0.500     | 0.500     | 0.40 ± 0.015  | 48.0                 |
| B         | 1.400 ± 0.005   | 0.488 ± 0.015 | 0.500     | 0.500     | 0.40 ± 0.015  | 73.0                 |
| C         | 1.400 ± 0.005   | 0.615 ± 0.015 | 0.500     | 0.500     | 0.40 ± 0.015  | 95.0                 |
|           | [35.56 ± 0.127] | [15.6 ± 0.4]  | [12.70]   | [12.70]   | [10.2 ± 0.38] |                      |

### STANDARD RATINGS

| CAPACITANCE (µF)                                   | CASE CODE | HE3 PART NUMBER*          | DSCC 10011 PART NUMBER* | MAX. ESR AT + 25 °C, 1 kHz (Q) | MAX. DCL AT + 25 °C |
|--|-----------|---------------------------|-------------------------|--------------------------------|---------------------|
| 18 000   | A         | HE3A183(1)025(2)(3)(4)(5) | 10011-06                | 0.060                          | 150 µA              |
| 24 000   | A         | HE3A243(1)025(2)(3)(4)(5) | 10011-06                | 0.060                          | 150 µA              |
| 36 000   | B         | HE3B363(1)025(2)(3)(4)(5) | 10011-04                | 0.045                          | 200 µA              |
| 48 000   | B         | HE3B483(1)025(2)(3)(4)(5) | 10011-03                | 0.045                          | 200 µA              |
| 54 000   | C         | HE3C543(1)025(2)(3)(4)(5) | 10011-02                | 0.035                          | 300 µA              |
| 72 000   | C         | HE3C723(1)025(2)(3)(4)(5) | 10011-01                | 0.035                          | 350 µA              |
| <b>50 WVdc AT + 85 °C ... 30 WVdc AT + 125 °C</b>  |           |                           |                         |                                |                     |
| 8000   | A         | HE3A802(1)050(2)(3)(4)(5) | 10011-09                | 0.075                          | 170 µA              |
| 16 000   | B         | HE3B163(1)050(2)(3)(4)(5) | 10011-08                | 0.045                          | 270 µA              |
| 24 000   | C         | HE3C243(1)050(2)(3)(4)(5) | 10011-07                | 0.035                          | 400 µA              |
| <b>63 WVdc AT + 85 °C ... 40 WVdc AT + 125 °C</b>  |           |                           |                         |                                |                     |
| 4000   | A         | HE3A402(1)063(2)(3)(4)(5) | 10011-12                | 0.060                          | 170 µA              |
| 8000   | B         | HE3B802(1)063(2)(3)(4)(5) | 10011-11                | 0.045                          | 270 µA              |
| 12 000   | C         | HE3C123(1)063(2)(3)(4)(5) | 10011-10                | 0.035                          | 400 µA              |
| <b>80 WVdc AT + 85 °C ... 50 WVdc AT + 125 °C</b>  |           |                           |                         |                                |                     |
| 3000   | A         | HE3A302(1)080(2)(3)(4)(5) | 10011-16                | 0.075                          | 300 µA              |
| 6000   | B         | HE3B602(1)080(2)(3)(4)(5) | 10011-15                | 0.060                          | 400 µA              |
| 9000   | C         | HE3C902(1)080(2)(3)(4)(5) | 10011-13                | 0.040                          | 500 µA              |
| <b>100 WVdc AT + 85 °C ... 65 WVdc AT + 125 °C</b> |           |                           |                         |                                |                     |
| 19000**  | A         | HE3A192(1)100(2)(3)(4)(5) | N/A                     | 0.075                          | 300 µA              |
| 36000**  | B         | HE3B362(1)100(2)(3)(4)(5) | N/A                     | 0.060                          | 400 µA              |
| 57000**  | C         | HE3C572(1)100(2)(3)(4)(5) | N/A                     | 0.050                          | 500 µA              |
| <b>125 WVdc AT + 85 °C ... 85 WVdc AT + 125 °C</b> |           |                           |                         |                                |                     |
| 11000**  | A         | HE3A112(1)125(2)(3)(4)(5) | N/A                     | 0.100                          | 300 µA              |
| 22000**  | B         | HE3B222(1)125(2)(3)(4)(5) | N/A                     | 0.085                          | 400 µA              |
| 33000**  | C         | HE3C332(1)125(2)(3)(4)(5) | N/A                     | 0.075                          | 500 µA              |

**Notes**  
 \* (1) Standard capacitance tolerance is 20 % or "M". Contact marketing for availability of 10 % or "K".  
 (2) Standard termination is "B" or "In/Lead". RoHS compliant or 100 % tin is available as "A".  
 (3) Standard reliability is "Z" or non-established reliability.  
 (4) Standard temperature range is "S" or - 55 °C to + 125 °C.  
 (5) Standard ESR is "S".

\*\* In bold and italic: Preliminary rating and electrical values. Contact marketing for availability.

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\* Pb containing terminations are not RoHS compliant, exemptions may apply

| HE3 TYPE | CASE CODE | 543 CAPACITANCE TOLERANCE   | K CAPACITANCE TOLERANCE  | 025 DC VOLTAGE RATING AT + 85 °C  | B TERMINATION AND PACKAGING                             | Z RELIABILITY LEVEL | S TEMPERATURE                        | S ESR        |
|----------|-----------|---|--------------------------|---|---|---------------------|--------------------------------------|--------------|
|          |           | This is expressed in microfarads. The first two digits are the significant figures. The third is the number of zeros to follow. | K = 10 % (1)<br>M = 20 % | This is expressed in V. To complete the three-digit block, zeros precede the voltage rating. A decimal point is indicated by an "R" (6F3 = 6.3 V) | A = 100 % tin (RoHS compliant)<br>B = Tin/lead and bulk | Z = Non-ER          | S = Standard<br>(- 55 °C to + 85 °C) | S = Standard |

**Note**  
 (1) Contact marketing for availability of 10 % tolerance.

| DSCC 10011 ORDERING INFORMATION               |                      |
|---|----------------------|
| 10011   | -01                  |
| DSCC DRAWING NUMBER                           | DASH NUMBER          |
| DEFENSE SUPPLY CENTER COLUMBUS COLUMBUS, OHIO | DRAWING NUMBER 10011 |

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