

TAZ Series



HRC6000 Medical Implantable Grade



The TAZ HRC6000 Medical Grade series is the next generation of our internally qualified implantable medical grade tantalum capacitors. These components are screened using our newly designed Q-Process to effectively remove components that may experience parametric shifts through customer processing or display instability through life testing.

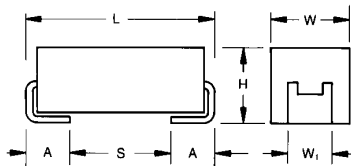
Due to the deficiencies of Weibull grading and its tendency to Burn-In potentially unstable units, this Q-Process utilizes a Product Level Designation system based on a simulated production routine performed on a sample from the population. Once that is completed a

calculation is done based on the performance of the sample which can take into account the application conditions of the end customer. This system also allows for derating recommendations to be relaxed as illustrated by the section below.

These components are manufactured and tested in the AVX Biddeford Maine facility which is ISO 13485 certified. For more information on this process or to request a specific rating please contact the factory. In addition, DC leakage testing at application voltage is available upon request.

CASE DIMENSIONS:

millimeters (inches)



| Case Code | Length (L) ±0.38 (0.015) | Width (W) ±0.38 (0.015) | Height (H) ±0.38 (0.015) | Term. Width (W _t) | Term. Length (A) +0.25/-0.13 (+0.010/-0.005) | S min | Typical Weight (g) |
|-----------|--------------------------------|-------------------------------|--------------------------------|---|--|-----------------|--------------------|
| E | 5.08 (0.200) | 2.54 (0.100) | 1.27 (0.050) | 2.41+0.13/-0.25 (0.095+0.005/-0.010) | 0.76 (0.030) | 2.92 (0.115) | 0.065 |
| H | 7.24 (0.285) | 3.81 (0.150) | 2.79 (0.110) | 3.68+0.13/-0.51 (0.145+0.005/-0.020) | 1.27 (0.050) | 4.06 (0.160) | 0.035 |

MARKING

(White marking on black body)



Polarity Stripe (+)

Capacitance Code
Rated Voltage

CAPACITANCE AND RATED VOLTAGE, V_R (VOLTAGE CODE) RANGE (LETTER DENOTES CASE SIZE)

| Capacitance | | Rated Voltage | | | |
|-------------|------|---------------|----|-----|-----|
| μF | Code | 4V | 6V | 10V | 15V |
| 10 | 106 | | | | E |
| 15 | 156 | | | E | |
| 22 | 226 | | E | | |
| 33 | 336 | E | | | |
| 47 | 476 | | | | |
| 68 | 686 | | | | |
| 100 | 107 | | | H | |
| 150 | 157 | | H | | |
| 220 | 227 | | H | | |
| 330 | 337 | H | | | |

Available ratings


TAZ Series




HRC6000 Medical Implantable Grade

HOW TO ORDER

| TAZ | E | 106 | * | 015 | C | □ | L | Q | 6 | ^ | ++ |
|-------------|------------------|---|---|---|--|--|--|---|---|---|---|
| Type | Case Size | Capacitance Code pF code: 1st two digits represent significant figures 3rd digit represents multiplier (number of zeros to follow) | Capacitance Tolerance J = ±5% K = ±10% M = ±20% | Voltage Code 004 = 4Vdc 006 = 6Vdc 010 = 10Vdc 015 = 15Vdc | ESR C = Std ESR L = Low ESR | Packaging B = Bulk R = 7" T&R W = Waffle | Inspection Level L = Group A | Reliability Grade Product Level Designator: Q = 0.1%/1000 hrs. Minimum, 60% conf | Qualification Level 6 = HRC6000 | Termination Finish H = Solder Plated 0 = Solder Fused 9 = Gold Plated 7 = 100% Tin | Surge Test Option 00 = None 23 = 10 Cycles, +25°C 24 = 10 Cycles, -55°C & +85°C 45 = 10 Cycles, -55°C & +85°C before Weibull |



LEAD-FREE
LEAD-FREE COMPATIBLE
COMPONENT



RoHS
COMPLIANT

For RoHS compliant products, please select correct termination style.

*Contact factory for AVX HRC6000 Medical Grade SCD details.

TECHNICAL SPECIFICATIONS

| | | | | | |
|------------------------------------|---|-----|---|-----|----|
| Technical Data: | Unless otherwise specified, all technical data relate to an ambient temperature of 25°C | | | | |
| Capacitance Range: | 10 µF to 330 µF | | | | |
| Capacitance Tolerance: | ±5%; ±10%; ±20% | | | | |
| Rated Voltage (V _R) | ≤ 85°C: | 4 | 6 | 10 | 15 |
| Category Voltage (V _C) | ≤ 125°C: | 2.7 | 4 | 6.7 | 10 |
| Temperature Range: | -55°C to +125°C | | | | |

| RATING & PART NUMBER REFERENCE | | Parametric Specifications by Rating | | | | | | Typical RMS Ripple Data by Rating | | | | | | | | | | | |
|--------------------------------|---|-------------------------------------|------|------------------|--------------|--------------|------------|-----------------------------------|-----------|---------------|-----------|-------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|--|
| | | Cap @ 120Hz | | DC Rated Voltage | | ESR @ 100kHz | | DCL max | | DF max | | Power Dissipation | | 25°C | | 85°C | | 125°C | |
| | | µF @ 25°C | Case | V @ +85°C | Ohms @ +25°C | +25°C (µA) | +85°C (µA) | +125°C (µA) | +25°C (%) | +85/125°C (%) | -55°C (%) | W | Ripple Current (100kHz) A | Ripple Current (100kHz) A | Ripple Current (100kHz) A | Ripple Voltage (100kHz) V | Ripple Voltage (100kHz) V | Ripple Voltage (100kHz) V | |
| AVX HRC6000 PN | E | 33 | 4 | 3 | 0.33 | 3.3 | 3.96 | 8 | 10 | 12 | 0.090 | 0.173 | 0.156 | 0.069 | 0.519 | 0.468 | 0.207 | | |
| TAZE336*004C□□L@6^++ | H | 330 | 4 | 0.9 | 3.30 | 33.0 | 39.6 | 10 | 12 | 12 | 0.090 | 0.316 | 0.285 | 0.126 | 0.285 | 0.256 | 0.114 | | |
| TAZE226*006C□□L@6^++ | E | 22 | 6 | 3.5 | 0.33 | 3.3 | 3.96 | 8 | 10 | 12 | 0.090 | 0.160 | 0.144 | 0.064 | 0.561 | 0.505 | 0.224 | | |
| TAZH157*006C□□L@6^++ | H | 150 | 6 | 0.9 | 2.25 | 22.5 | 27.0 | 10 | 12 | 12 | 0.090 | 0.316 | 0.285 | 0.126 | 0.285 | 0.256 | 0.114 | | |
| TAZH227*006C□□L@6^++ | H | 220 | 6 | 0.9 | 3.30 | 33.0 | 39.6 | 10 | 12 | 12 | 0.090 | 0.316 | 0.285 | 0.126 | 0.285 | 0.256 | 0.114 | | |
| TAZE156*010C□□LQ6^++ | E | 15 | 10 | 3 | 0.375 | 3.75 | 4.50 | 8 | 10 | 10 | 0.090 | 0.173 | 0.156 | 0.069 | 0.520 | 0.468 | 0.208 | | |
| TAZH107*010C□□L@6^++ | H | 100 | 10 | 0.9 | 2.50 | 25.0 | 30.0 | 10 | 12 | 12 | 0.090 | 0.316 | 0.285 | 0.126 | 0.285 | 0.256 | 0.114 | | |
| TAZE106*015C□□LQ6^++ | E | 10 | 15 | 4 | 0.375 | 3.75 | 4.50 | 6 | 8 | 8 | 0.090 | 0.150 | 0.135 | 0.060 | 0.600 | 0.540 | 0.240 | | |

All technical data relates to an ambient temperature of +25°C. Capacitance and DF are measured at 120Hz, 0.5V RMS with a maximum DC bias of 2.2 volts. DCL is measured at rated voltage after 5 minutes.

NOTE: AVX reserves the right to supply a higher voltage rating or tighter tolerance part in the same case size, to the same reliability standards.

HRC6000 DERATING GUIDELINES

Due to our new Q-Process technology the need for a typical 50% derating of the capacitors rated voltage in application can be relaxed. Below is a table outlining some of the common applications where these components are utilized along with appropriate derating recommendations. When determining the appropriate capacitor voltage rating to utilize, the application voltage is determined by the maximum D.C. voltage with the addition of any A.C. ripple voltage that may be present.

| Recommended Derating | Application |
|----------------------|-------------|
| 20% | Filtering |
| 0% | Pacing |
| 0% | Hold-Up |
| 0% | Charging |