

TCJ Series



Tantalum Solid Electrolytic Chip Capacitors with Conductive Polymer Electrode



- Conductive polymer electrode reduces ignition failure mode
- Lower ESR
- 3x reflow 260°C compatible
- CV range: 0.47-470µF / 2.5-125V
- 16 case sizes available



Elektra Award 2010



LEAD-FREE
LEAD-FREE COMPATIBLE
COMPONENT



RoHS
COMPLIANT

CASE DIMENSIONS: millimeters (inches)



For part marking see page 132

| Code | EIA Code | EIA Metric | L±0.20 (0.008) | W+0.20 (0.008) -0.10 (0.004) | H+0.20 (0.008) -0.10 (0.004) | W ₁ ±0.20 (0.008) | A+0.30 (0.012) -0.20 (0.008) | S Min. |
|------|----------|------------|----------------|------------------------------|------------------------------|------------------------------|------------------------------|--------------|
| A | 1206 | 3216-18 | 3.20 (0.126) | 1.60 (0.063) | 1.60 (0.063) | 1.20 (0.047) | 0.80 (0.031) | 1.10 (0.043) |
| B | 1210 | 3528-21 | 3.50 (0.138) | 2.80 (0.110) | 1.90 (0.075) | 2.20 (0.087) | 0.80 (0.031) | 1.40 (0.055) |
| C | 2312 | 6032-28 | 6.00 (0.236) | 3.20 (0.126) | 2.60 (0.102) | 2.20 (0.087) | 1.30 (0.051) | 2.90 (0.114) |
| D | 2917 | 7343-31 | 7.30 (0.287) | 4.30 (0.169) | 2.90 (0.114) | 2.40 (0.094) | 1.30 (0.051) | 4.40 (0.173) |
| E | 2917 | 7343-43 | 7.30 (0.287) | 4.30 (0.169) | 4.10 (0.162) | 2.40 (0.094) | 1.30 (0.051) | 4.40 (0.173) |
| G | 1206 | 3216-15 | 3.20 (0.126) | 1.60 (0.063) | 1.50 (0.059) max | 1.20 (0.047) | 0.80 (0.031) | 1.10 (0.043) |
| H | 1210 | 3528-15 | 3.50 (0.138) | 2.80 (0.110) | 1.50 (0.059) max | 2.20 (0.087) | 0.80 (0.031) | 1.40 (0.055) |
| K | 1206 | 3216-10 | 3.20 (0.126) | 1.60 (0.063) | 1.00 (0.039) max | 1.20 (0.047) | 0.80 (0.031) | 1.10 (0.043) |
| N | 0805 | 2012-10 | 2.05 (0.081) | 1.30 (0.051) | 1.00 (0.039) max | 1.00 (0.039) | 0.50 (0.020) | 0.85 (0.033) |
| P | 0805 | 2012-15 | 2.05 (0.081) | 1.35 (0.050) | 1.50 (0.059) max | 1.00±0.10 (0.039±0.004) | 0.50 (0.020) | 0.85 (0.033) |
| R | 0805 | 2012-12 | 2.05 (0.081) | 1.30 (0.051) | 1.20 (0.047) max | 1.00±0.10 (0.039±0.004) | 0.50 (0.020) | 0.85 (0.033) |
| S | 1206 | 3216-12 | 3.20 (0.126) | 1.60 (0.063) | 1.20 (0.047) max | 1.20 (0.047) | 0.80 (0.031) | 1.10 (0.043) |
| T | 1210 | 3528-12 | 3.50 (0.138) | 2.80 (0.110) | 1.20 (0.047) max | 2.20 (0.087) | 0.80 (0.031) | 1.40 (0.055) |
| V | 2924 | 7361-38 | 7.30 (0.287) | 6.10 (0.240) | 3.55 (0.140) | 3.10 (0.120) | 1.30 (0.051) | 4.40 (0.173) |
| W | 2312 | 6032-15 | 6.00 (0.236) | 3.20 (0.126) | 1.50 (0.059) max | 2.20 (0.087) | 1.30 (0.051) | 2.90 (0.114) |
| Y | 2917 | 7343-20 | 7.30 (0.287) | 4.30 (0.169) | 2.00 (0.079) max | 2.40 (0.094) | 1.30 (0.051) | 4.40 (0.173) |

W1 dimension applies to the termination width for A dimensional area only.

HOW TO ORDER

TCJ

Type

A

Case Size
See table above

226

Capacitance Code
pF code: 1st two digits represent significant figures, 3rd digit represents multiplier (number of zeros to follow)

M

Tolerance
M=±20%

004

Rated DC Voltage
002=2.5Vdc
004=4Vdc
006=6.3Vdc
010=10Vdc
016=16Vdc
020=20Vdc
025=25Vdc
035=35Vdc
050=50Vdc
063=63Vdc
075=75Vdc
100=100Vdc
125=125Vdc

R

Packaging
R = Pure Tin 7" Reel
S = Pure Tin 13" Reel

0300

ESR in mΩ

TECHNICAL SPECIFICATIONS

Technical Data:

All technical data relate to an ambient temperature of +25°C

Capacitance Range: 0.47 µF to 470 µF

Capacitance Tolerance: ±20%

Leakage Current DCL: 0.1CV

| Rated Voltage (V _R) | ≤ +85°C: | 2.5 | 4 | 6.3 | 10 | 16 | 2.5 | 4 | 6.3 | 10 | 16 | 20 | 25 | 35 | 50 | 63 | 75 | 100 | 125 |
|------------------------------------|-----------|-----|-----|-----|----|----|------|-----|-----|----|------|----|----|----|----|------|------|-----|-------|
| Category Voltage (V _C) | ≤ +105°C: | | | | | | 2 | 3.2 | 5 | 8 | 12.8 | 16 | 20 | 28 | 40 | 50.4 | 60 | 80 | 100 |
| Category Voltage (V _C) | ≤ +125°C: | 1.7 | 2.7 | 4 | 7 | 10 | | | | | | | | | | | | | |
| Surge Voltage (V _S) | ≤ +85°C: | 3.3 | 5.2 | 8 | 13 | 20 | 3.25 | 5.2 | 8 | 13 | 20.8 | 26 | 33 | 46 | 65 | 81.9 | 97.5 | 130 | 162.5 |
| Surge Voltage (V _S) | ≤ +105°C: | | | | | | 2.5 | 4 | 6 | 10 | 16 | 20 | 25 | 35 | 50 | 63 | 75 | 100 | 125 |
| Surge Voltage (V _S) | ≤ +125°C: | 2.2 | 3.4 | 5 | 8 | 13 | | | | | | | | | | | | | |

Temperature Range: -55°C to +125°C, -55°C to +105°C

Reliability: 1% per 1000 hours at 85°C, V_R with 0.1Ω/V series impedance, 60% confidence level



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

125°C RATED PARTS

| Capacitance | | Rated Voltage DC (V _R) to 85°C | | | | |
|-------------|------|--|---------------------------------|--|----------------------------------|----------------------------|
| μF | Code | 2.5V (e) | 4V (G) | 6.3V (J) | 10V (A) | 16V (C) |
| 1.0 | 105 | | | | | |
| 4.7 | 475 | | | | K(500), R(500) | |
| 6.8 | 685 | | | | | A(200) |
| 10 | 106 | | | A(300), R(500) | A(300) | A(200), B(200), T(150,200) |
| 15 | 156 | | A(300) | A(300) | A(200) | B(150) |
| 22 | 226 | | A(300) | A(300), K(400) R(500), S(400), T(150) | B(300), T(150) | B(150) |
| 33 | 336 | | A(300) | A(200) B(70,200) T(150) | B(70,200) C(100) T(70,150) | |
| 47 | 476 | | A(200), T(80) | A(200), B(70) K(400), P(500) T(80,120) | B(70), C(100) | |
| 68 | 686 | A(250) | A(250), B(70) T(80) | B(55,70) C(100), W(70) | | |
| 100 | 107 | A(200), B(70) | A(200), B(70) G(300), T(150) | B(45,69,70) | | |
| 150 | 157 | B(70) | B(70) | B(45,69,70) H(200), W(40,70) | | |
| 220 | 227 | | B(45,70) | B(70,200) | | |

105°C RATED PARTS

| Cap | | Rated Voltage DC (V _R) to 85°C | | | | | | | | | | | | |
|------|------|--|-----------------|------------------------------|----------|---------|---------------|---|-----------------------------------|----------------------|-----------------------|---------|----------|----------|
| μF | Code | 2.5V (e) | 4V (G) | 6.3V (J) | 10V (A) | 16V (C) | 20V (D) | 25V (E) | 35V (V) | 50V (T) | 63V (J) | 75V (P) | 100V (A) | 125V (B) |
| 0.47 | 474 | | | | | | | | | | B(400) | | | |
| 0.68 | 684 | | | | | | | | | B(400) | B(300) | | | |
| 1.0 | 105 | | | | | | | N*, P(500) | A(250)* | A*, B(300) | B(300), C(300) | | | |
| 1.5 | 155 | | | | | | | | B(200) | B(300), C(300) | C(300) | | | |
| 2.2 | 225 | | | | | | | | B(200) | C(300) | C(200) | | | |
| 3.3 | 335 | | | | | | | | B(200) | C(200) | C(200) | | | D(250) |
| 4.7 | 475 | | | | | | | B(150) | B(200), C(200) | C(200) | C(200), D(120) | D(150) | | |
| 6.8 | 685 | | | | | | | B(150) | C(200) | C(200), D(120) | D(120), E(100,150) | D(120) | V(250) | |
| 10 | 106 | | | N(200*,500) | | | | B(100,150) | B(200), C(200), Y(70) | D(120), E(70,100) | E(100,150) | | | |
| 15 | 156 | | | | | | | B(100,150), Y(70,200)* | C(200), D(70,100), W*, Y(200)* | E(70,100) | | | | |
| 22 | 226 | | | N(500) | | Y(70) | | B(100,150), C(100), D(60,100), Y(70) | D(70,100), Y(70)* | | | | | |
| 33 | 336 | | | | | Y(70) | Y(70) | D(60,100), Y(70,100) | D(70,100), E(55,70), Y* | | | | | |
| 47 | 476 | | | K(150,200), R(500), T(70) | | Y(70) | D(55)*, Y(70) | D(60,100), E(50) | E(55) | | | | | |
| 68 | 686 | | | T(200) | | | D(55), E(45) | E(50) | | | | | | |
| 100 | 107 | | | A(70)*, B(55), T(200) | | E(40) | D(55), E(45) | | | | | | | |
| 150 | 157 | | | B(55) | | E(40) | | | | | | | | |
| 220 | 227 | A(35)* | B(55) | D(50), W(100)*, Y(50) | D(40,50) | | | | | | | | | |
| 330 | 337 | | D(50), Y(50) | D(40,50) Y(40,50) | | | | | | | | | | |
| 470 | 477 | D(50), Y(50) | D(50) Y(50) | | | | | | | | | | | |

Available Ratings, (ESR ratings in mOhms in brackets)

Engineering samples - please contact manufacturer

*Codes under development - subject to change

Note: Voltage ratings are minimum values. AVX reserves the right to supply higher ratings in the same case size, to the same reliability standards.



TCJ Series



Tantalum Solid Electrolytic Chip Capacitors with Conductive Polymer Electrode

RATINGS & PART NUMBER REFERENCE

| AVX Part No. | Case Size | Capacitance (µF) | Rated Voltage (V) | DCL (µA) Max. | DF % Max. | ESR Max. (mΩ) @100kHz | MSL | 100kHz RMS Current (mA) | | | 100kHz RMS Voltage (mV) | | |
|---|-----------|------------------|-------------------|---------------|-----------|-----------------------|-----|-------------------------|------|-------|-------------------------|------|-------|
| | | | | | | | | 25°C | 85°C | 125°C | 25°C | 85°C | 125°C |
| 2.5 Volt @ 85°C (1.7 Volt @ 125°C) | | | | | | | | | | | | | |
| TCJA686M002#0250 | A | 68 | 2.5 | 17.0 | 6 | 250 | 3 | 548 | 493 | 219 | 137 | 123 | 55 |
| TCJA107M002#0200 | A | 100 | 2.5 | 25.0 | 6 | 200 | 3 | 612 | 551 | 245 | 122 | 110 | 49 |
| TCJB107M002#0070 | B | 100 | 2.5 | 25.0 | 6 | 70 | 3 | 1102 | 992 | 441 | 77 | 69 | 31 |
| TCJB157M002#0070 | B | 150 | 2.5 | 37.5 | 6 | 70 | 3 | 1102 | 992 | 441 | 77 | 69 | 31 |
| 4 Volt @ 85°C (2.7 Volt @ 125°C) | | | | | | | | | | | | | |
| TCJA156M004#0300 | A | 15 | 4 | 6.0 | 6 | 300 | 3 | 500 | 450 | 200 | 150 | 135 | 60 |
| TCJA226M004#0300 | A | 22 | 4 | 8.8 | 6 | 300 | 3 | 500 | 450 | 200 | 150 | 135 | 60 |
| TCJA336M004#0300 | A | 33 | 4 | 13.2 | 6 | 300 | 3 | 500 | 450 | 200 | 150 | 135 | 60 |
| TCJA476M004#0200 | A | 47 | 4 | 18.8 | 6 | 200 | 3 | 612 | 551 | 245 | 122 | 110 | 49 |
| TCJT476M004#0080 | T | 47 | 4 | 18.8 | 8 | 80 | 3 | 1000 | 900 | 400 | 80 | 72 | 32 |
| TCJA686M004#0250 | A | 68 | 4 | 27.2 | 6 | 250 | 3 | 548 | 493 | 219 | 137 | 123 | 55 |
| TCJB686M004#0070 | B | 68 | 4 | 27.2 | 6 | 70 | 3 | 1102 | 992 | 441 | 77 | 69 | 31 |
| TCJT686M004#0080 | T | 68 | 4 | 27.2 | 8 | 80 | 3 | 1000 | 900 | 400 | 80 | 72 | 32 |
| TCJA107M004#0200 | A | 100 | 4 | 40.0 | 6 | 200 | 3 | 612 | 551 | 245 | 122 | 110 | 49 |
| TCJB107M004#0070 | B | 100 | 4 | 40.0 | 8 | 70 | 3 | 1102 | 992 | 441 | 77 | 69 | 31 |
| TCJG107M004#0300 | G | 100 | 4 | 40.0 | 10 | 300 | 3 | 483 | 435 | 193 | 145 | 130 | 58 |
| TCJT107M004#0150 | T | 100 | 4 | 40.0 | 8 | 150 | 3 | 730 | 657 | 292 | 110 | 99 | 44 |
| TCJB157M004#0070 | B | 150 | 4 | 60.0 | 6 | 70 | 3 | 1102 | 992 | 441 | 77 | 69 | 31 |
| TCJB227M004#0045 | B | 220 | 4 | 88.0 | 10 | 45 | 3 | 1374 | 1237 | 550 | 62 | 56 | 25 |
| TCJB227M004#0070 | B | 220 | 4 | 88.0 | 10 | 70 | 3 | 1102 | 992 | 441 | 77 | 69 | 31 |
| 6.3 Volt @ 85°C (4 Volt @ 125°C) | | | | | | | | | | | | | |
| TCJA106M006#0300 | A | 10 | 6.3 | 6.0 | 6 | 300 | 3 | 500 | 450 | 200 | 150 | 135 | 60 |
| TCJR106M006#0500 | R | 10 | 6.3 | 6.0 | 6 | 500 | 3 | 332 | 298 | 133 | 166 | 149 | 66 |
| TCJA156M006#0300 | A | 15 | 6.3 | 9.0 | 6 | 300 | 3 | 500 | 450 | 200 | 150 | 135 | 60 |
| TCJA226M006#0300 | A | 22 | 6.3 | 13.2 | 6 | 300 | 3 | 500 | 450 | 200 | 150 | 135 | 60 |
| TCJK226M006#0400 | K | 22 | 6.3 | 13.2 | 8 | 400 | 3 | 403 | 363 | 161 | 161 | 145 | 64 |
| TCJR226M006#0500 | R | 22 | 6.3 | 13.2 | 10 | 500 | 3 | 332 | 298 | 133 | 166 | 149 | 66 |
| TCJS226M006#0400 | S | 22 | 6.3 | 13.2 | 8 | 400 | 3 | 403 | 363 | 161 | 161 | 145 | 64 |
| TCJT226M006#0150 | T | 22 | 6.3 | 13.2 | 6 | 150 | 3 | 730 | 657 | 292 | 110 | 99 | 44 |
| TCJA336M006#0200 | A | 33 | 6.3 | 19.8 | 6 | 200 | 3 | 612 | 551 | 245 | 122 | 110 | 49 |
| TCJB336M006#0070 | B | 33 | 6.3 | 19.8 | 6 | 70 | 3 | 1102 | 992 | 441 | 77 | 69 | 31 |
| TCJB336M006#0200 | B | 33 | 6.3 | 19.8 | 6 | 200 | 3 | 652 | 587 | 261 | 130 | 117 | 52 |
| TCJT336M006#0150 | T | 33 | 6.3 | 19.8 | 8 | 150 | 3 | 730 | 657 | 292 | 110 | 99 | 44 |
| TCJA476M006#0200 | A | 47 | 6.3 | 28.2 | 6 | 200 | 3 | 612 | 551 | 245 | 122 | 110 | 49 |
| TCJB476M006#0070 | B | 47 | 6.3 | 28.2 | 6 | 70 | 3 | 1102 | 992 | 441 | 77 | 69 | 31 |
| TCJK476M006#0400 | K | 47 | 6.3 | 28.2 | 6 | 400 | 3 | 403 | 363 | 161 | 161 | 146 | 64 |
| TCJP476M006#0500 | P | 47 | 6.3 | 28.2 | 10 | 500 | 3 | 346 | 312 | 139 | 173 | 156 | 69 |
| TCJT476M006#0080 | T | 47 | 6.3 | 28.2 | 8 | 80 | 3 | 1000 | 900 | 400 | 80 | 72 | 32 |
| TCJT476M006#0120 | T | 47 | 6.3 | 28.2 | 8 | 120 | 3 | 816 | 735 | 327 | 98 | 88 | 39 |
| TCJB686M006#0055 | B | 68 | 6.3 | 40.8 | 8 | 55 | 3 | 1243 | 1119 | 497 | 68 | 62 | 27 |
| TCJB686M006#0070 | B | 68 | 6.3 | 40.8 | 8 | 70 | 3 | 1102 | 992 | 441 | 77 | 69 | 31 |
| TCJC686M006#0100 | C | 68 | 6.3 | 40.8 | 6 | 100 | 3 | 1049 | 944 | 420 | 105 | 94 | 42 |
| TCJW686M006#0070 | W | 68 | 6.3 | 40.8 | 8 | 70 | 3 | 1134 | 1021 | 454 | 79 | 71 | 32 |
| TCJB107M006#0045 | B | 100 | 6.3 | 60.0 | 10 | 45 | 3 | 1374 | 1237 | 550 | 62 | 56 | 25 |
| TCJB107M006#0069 | B | 100 | 6.3 | 60.0 | 10 | 69 | 3 | 1110 | 999 | 444 | 77 | 69 | 31 |
| TCJB107M006#0070 | B | 100 | 6.3 | 60.0 | 10 | 70 | 3 | 1102 | 992 | 441 | 77 | 69 | 31 |
| TCJB157M006#0045 | B | 150 | 6.3 | 90.0 | 10 | 45 | 3 | 1374 | 1237 | 550 | 62 | 56 | 25 |
| TCJB157M006#0069 | B | 150 | 6.3 | 90.0 | 10 | 69 | 3 | 1110 | 999 | 444 | 77 | 69 | 31 |
| TCJB157M006#0070 | B | 150 | 6.3 | 90.0 | 10 | 70 | 3 | 1102 | 992 | 441 | 77 | 69 | 31 |
| TCJH157M006#0200 | H | 150 | 6.3 | 90.0 | 6 | 200 | 3 | 632 | 569 | 253 | 126 | 114 | 51 |
| TCJW157M006#0040 | W | 150 | 6.3 | 90.0 | 6 | 40 | 3 | 1500 | 1350 | 600 | 60 | 54 | 24 |
| TCJW157M006#0070 | W | 150 | 6.3 | 90.0 | 6 | 70 | 3 | 1134 | 1021 | 454 | 79 | 71 | 32 |
| TCJB227M006#0070 | B | 220 | 6.3 | 132.0 | 10 | 70 | 3 | 1102 | 992 | 441 | 77 | 69 | 31 |
| TCJB227M006#0200 | B | 220 | 6.3 | 132.0 | 10 | 200 | 3 | 652 | 587 | 261 | 130 | 117 | 52 |
| 10 Volt @ 85°C (7 Volt @ 125°C) | | | | | | | | | | | | | |
| TCJK475M010#0500 | K | 4.7 | 10 | 4.7 | 6 | 500 | 3 | 346 | 312 | 139 | 173 | 156 | 69 |
| TCJR475M010#0500 | R | 4.7 | 10 | 4.7 | 6 | 500 | 3 | 332 | 298 | 133 | 166 | 149 | 66 |
| TCJA106M010#0300 | A | 10 | 10 | 10.0 | 6 | 300 | 3 | 500 | 450 | 200 | 150 | 135 | 60 |
| TCJA156M010#0200 | A | 15 | 10 | 15.0 | 6 | 200 | 3 | 612 | 551 | 245 | 122 | 110 | 49 |

Moisture Sensitivity Level (MSL) is defined according to J-STD-020.

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

ESR allowed to move up to 1.25 times catalog limit post mounting.

For typical weight and composition see page 126.

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.



TCJ Series



Tantalum Solid Electrolytic Chip Capacitors with Conductive Polymer Electrode

RATINGS & PART NUMBER REFERENCE

| AVX Part No. | Case Size | Capacitance (µF) | Rated Voltage (V) | DCL (µA) Max. | DF % Max. | ESR Max. (mΩ) @100kHz | MSL | 100kHz RMS Current (mA) | | | 100kHz RMS Voltage (mV) | | |
|---|-----------|------------------|-------------------|---------------|-----------|-----------------------|-----|-------------------------|------|-------|-------------------------|------|-------|
| | | | | | | | | 25°C | 85°C | 125°C | 25°C | 85°C | 125°C |
| TCJB226M010#0300 | B | 22 | 10 | 22.0 | 6 | 300 | 3 | 532 | 479 | 213 | 160 | 144 | 64 |
| TCJT226M010#0150 | T | 22 | 10 | 22.0 | 6 | 150 | 3 | 730 | 657 | 292 | 110 | 99 | 44 |
| TCJB336M010#0070 | B | 33 | 10 | 33.0 | 6 | 70 | 3 | 1102 | 992 | 441 | 77 | 69 | 31 |
| TCJB336M010#0200 | B | 33 | 10 | 33.0 | 6 | 200 | 3 | 652 | 587 | 261 | 130 | 117 | 52 |
| TCJC336M010#0100 | C | 33 | 10 | 33.0 | 6 | 100 | 3 | 1049 | 944 | 420 | 105 | 94 | 42 |
| TCJT336M010#0070 | T | 33 | 10 | 33.0 | 6 | 70 | 3 | 1069 | 962 | 428 | 75 | 67 | 30 |
| TCJT336M010#0150 | T | 33 | 10 | 33.0 | 6 | 150 | 3 | 730 | 657 | 292 | 110 | 99 | 44 |
| TCJB476M010#0070 | B | 47 | 10 | 47.0 | 6 | 70 | 3 | 1102 | 992 | 441 | 77 | 69 | 31 |
| TCJC476M010#0100 | C | 47 | 10 | 47.0 | 6 | 100 | 3 | 1049 | 944 | 420 | 105 | 94 | 42 |
| 16 Volt @ 85°C (10 Volt @ 125°C) | | | | | | | | | | | | | |
| TCJA685M016#0200 | A | 6.8 | 16 | 10.9 | 6 | 200 | 3 | 612 | 551 | 245 | 122 | 110 | 49 |
| TCJA106M016#0200 | A | 10 | 16 | 16.0 | 6 | 200 | 3 | 612 | 551 | 245 | 122 | 110 | 49 |
| TCJB106M016#0200 | B | 10 | 16 | 16.0 | 6 | 200 | 3 | 652 | 587 | 261 | 130 | 117 | 52 |
| TCJT106M016#0150 | T | 10 | 16 | 16.0 | 6 | 150 | 3 | 730 | 657 | 292 | 110 | 99 | 44 |
| TCJT106M016#0200 | T | 10 | 16 | 16.0 | 6 | 200 | 3 | 632 | 569 | 253 | 126 | 114 | 51 |
| TCJB156M016#0150 | B | 15 | 16 | 24.0 | 6 | 150 | 3 | 753 | 677 | 301 | 113 | 102 | 45 |
| TCJB226M016#0150 | B | 22 | 16 | 35.2 | 6 | 150 | 3 | 753 | 677 | 301 | 113 | 102 | 45 |

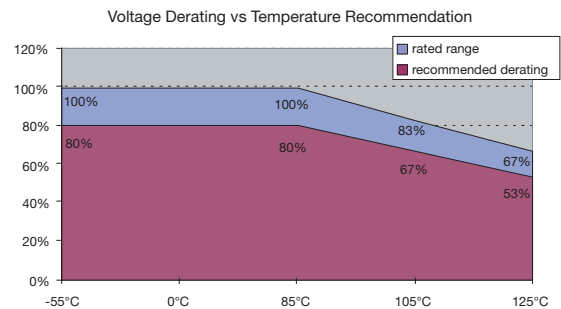
Moisture Sensitivity Level (MSL) is defined according to J-STD-020.

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

ESR allowed to move up to 1.25 times catalog limit post mounting.

For typical weight and composition see page 126.

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.



| AVX Part No. | Case Size | Capacitance (µF) | Rated Voltage (V) | DCL (µA) Max. | DF % Max. | ESR Max. (mΩ) @100kHz | MSL | 100kHz RMS Current (mA) | | | 100kHz RMS Voltage (mV) | | |
|---|-----------|------------------|-------------------|---------------|-----------|-----------------------|-----|-------------------------|------|-------|-------------------------|------|-------|
| | | | | | | | | 25°C | 85°C | 105°C | 25°C | 85°C | 105°C |
| 2.5 Volt @ 85°C (2 Volt @ 105°C) | | | | | | | | | | | | | |
| TCJD477M002#0050 | D | 470 | 2.5 | 117.5 | 6 | 50 | 3 | 1732 | 1559 | 1126 | 87 | 78 | 56 |
| TCJY477M002#0050 | Y | 470 | 2.5 | 117.5 | 6 | 50 | 3 | 1581 | 1423 | 1028 | 79 | 71 | 51 |
| 4 Volt @ 85°C (3.2 Volt @ 105°C) | | | | | | | | | | | | | |
| TCJB227M004#0055 | B | 220 | 4 | 88 | 10 | 55 | 3 | 1243 | 1119 | 808 | 68 | 62 | 44 |
| TCJD337M004#0050 | D | 330 | 4 | 132 | 6 | 50 | 3 | 1732 | 1559 | 1126 | 87 | 78 | 56 |
| TCJY337M004#0050 | Y | 330 | 4 | 132 | 6 | 50 | 3 | 1581 | 1423 | 1028 | 79 | 71 | 51 |
| TCJD477M004#0050 | D | 470 | 4 | 188 | 6 | 50 | 3 | 1732 | 1559 | 1126 | 87 | 78 | 56 |
| TCJY477M004#0050 | Y | 470 | 4 | 188 | 6 | 50 | 3 | 1581 | 1423 | 1028 | 79 | 71 | 51 |
| 6.3 Volt @ 85°C (5 Volt @ 105°C) | | | | | | | | | | | | | |
| TCJN106M006#0500 | N | 10 | 6.3 | 6.0 | 6 | 500 | 3 | 316 | 285 | 206 | 158 | 142 | 103 |
| TCJN226M006#0500 | N | 22 | 6.3 | 13.2 | 10 | 500 | 3 | 316 | 285 | 206 | 158 | 142 | 103 |
| TCJK476M006#0150 | K | 47 | 6.3 | 28.2 | 6 | 150 | 3 | 658 | 592 | 428 | 99 | 89 | 64 |
| TCJK476M006#0200 | K | 47 | 6.3 | 28.2 | 6 | 200 | 3 | 570 | 513 | 371 | 114 | 103 | 74 |
| TCJR476M006#0500 | R | 47 | 6.3 | 28.2 | 10 | 500 | 3 | 332 | 298 | 216 | 166 | 149 | 108 |
| TCJT476M006#0070 | T | 47 | 6.3 | 28.2 | 8 | 70 | 3 | 1069 | 962 | 695 | 75 | 67 | 49 |
| TCJT686M006#0200 | T | 68 | 6.3 | 40.8 | 8 | 200 | 3 | 632 | 569 | 411 | 126 | 114 | 82 |
| TCJB107M006#0055 | B | 100 | 6.3 | 60 | 10 | 55 | 3 | 1243 | 1119 | 808 | 68 | 62 | 44 |
| TCJT107M006#0200 | T | 100 | 6.3 | 60 | 10 | 200 | 3 | 632 | 569 | 411 | 126 | 114 | 82 |
| TCJB157M006#0055 | B | 150 | 6.3 | 90 | 10 | 55 | 3 | 1243 | 1119 | 808 | 68 | 62 | 44 |
| TCJD227M006#0050 | D | 220 | 6.3 | 138.6 | 6 | 50 | 3 | 1732 | 1559 | 1126 | 87 | 78 | 56 |
| TCJY227M006#0050 | Y | 220 | 6.3 | 138.6 | 6 | 50 | 3 | 1581 | 1423 | 1028 | 79 | 71 | 51 |
| TCJD337M006#0040 | D | 330 | 6.3 | 207.9 | 6 | 40 | 3 | 1936 | 1743 | 1259 | 77 | 70 | 50 |
| TCJD337M006#0050 | D | 330 | 6.3 | 207.9 | 6 | 50 | 3 | 1732 | 1559 | 1126 | 87 | 78 | 56 |
| TCJY337M006#0040 | Y | 330 | 6.3 | 198 | 12 | 40 | 3 | 1768 | 1591 | 1149 | 71 | 64 | 46 |
| TCJY337M006#0050 | Y | 330 | 6.3 | 198 | 12 | 50 | 3 | 1581 | 1423 | 1028 | 79 | 71 | 51 |
| 10 Volt @ 85°C (8 Volt @ 105°C) | | | | | | | | | | | | | |
| TCJD227M010#0040 | D | 220 | 10 | 220 | 6 | 40 | 3 | 1936 | 1743 | 1259 | 77 | 70 | 50 |
| TCJD227M010#0050 | D | 220 | 10 | 220 | 6 | 50 | 3 | 1732 | 1559 | 1126 | 87 | 78 | 56 |
| 16 Volt @ 85°C (12.8 Volt @ 105°C) | | | | | | | | | | | | | |
| TCJY336M016#0070 | Y | 33 | 16 | 52.8 | 6 | 70 | 3 | 1336 | 1203 | 869 | 94 | 84 | 61 |
| TCJY476M016#0070 | Y | 47 | 16 | 75.2 | 6 | 70 | 3 | 1336 | 1203 | 869 | 94 | 84 | 61 |
| TCJE107M016#0040 | E | 100 | 16 | 160.0 | 6 | 40 | 3 | 2031 | 1828 | 1320 | 81 | 73 | 53 |
| TCJE157M016#0040 | E | 150 | 16 | 240.0 | 6 | 40 | 3 | 2031 | 1828 | 1320 | 81 | 73 | 53 |



TCJ Series



Tantalum Solid Electrolytic Chip Capacitors with Conductive Polymer Electrode

RATINGS & PART NUMBER REFERENCE

| AVX Part No. | Case Size | Capacitance (µF) | Rated Voltage (V) | DCL (µA) Max. | DF % Max. | ESR Max. (mΩ) @100kHz | MSL | 100kHz RMS Current (mA) | | | 100kHz RMS Voltage (mV) | | |
|---|-----------|------------------|-------------------|---------------|-----------|-----------------------|-----|-------------------------|------|-------|-------------------------|------|-------|
| | | | | | | | | 25°C | 85°C | 105°C | 25°C | 85°C | 105°C |
| 20 Volt @ 85°C (16 Volt @ 105°C) | | | | | | | | | | | | | |
| TCJY226M020#0070 | Y | 22 | 20 | 44.0 | 6 | 70 | 3 | 1336 | 1203 | 869 | 94 | 84 | 61 |
| TCJY336M020#0070 | Y | 33 | 20 | 66.0 | 6 | 70 | 3 | 1336 | 1203 | 869 | 94 | 84 | 61 |
| TCJY476M020#0070 | Y | 47 | 20 | 94.0 | 6 | 70 | 3 | 1336 | 1203 | 869 | 94 | 84 | 61 |
| TCJD686M020#0055 | D | 68 | 20 | 136.0 | 6 | 55 | 3 | 1651 | 1486 | 1073 | 91 | 82 | 59 |
| TCJE686M020#0045 | E | 68 | 20 | 136.0 | 6 | 45 | 3 | 1915 | 1723 | 1245 | 86 | 78 | 56 |
| TCJD107M020#0055 | D | 100 | 20 | 200.0 | 6 | 55 | 3 | 1651 | 1486 | 1073 | 91 | 82 | 59 |
| TCJE107M020#0045 | E | 100 | 20 | 200.0 | 6 | 45 | 3 | 1915 | 1723 | 1245 | 86 | 78 | 56 |
| 25 Volt @ 85°C (20 Volt @ 105°C) | | | | | | | | | | | | | |
| TCJP105M025#0500 | P | 1.0 | 25 | 2.5 | 6 | 500 | 3 | 346 | 312 | 225 | 173 | 156 | 113 |
| TCJB475M025#0150 | B | 4.7 | 25 | 11.8 | 6 | 150 | 3 | 753 | 677 | 489 | 113 | 102 | 73 |
| TCJB685M025#0150 | B | 6.8 | 25 | 17.0 | 6 | 150 | 3 | 753 | 677 | 489 | 113 | 102 | 73 |
| TCJB106M025#0100 | B | 10 | 25 | 25.0 | 6 | 100 | 3 | 922 | 830 | 599 | 92 | 83 | 60 |
| TCJB106M025#0150 | B | 10 | 25 | 25.0 | 6 | 150 | 3 | 753 | 677 | 489 | 113 | 102 | 73 |
| TCJB156M025#0100 | B | 15 | 25 | 37.5 | 6 | 100 | 3 | 922 | 830 | 599 | 92 | 83 | 60 |
| TCJB156M025#0150 | B | 15 | 25 | 37.5 | 6 | 150 | 3 | 753 | 677 | 489 | 113 | 102 | 73 |
| TCJB226M025#0100 | B | 22 | 25 | 55.0 | 6 | 100 | 3 | 922 | 830 | 599 | 92 | 83 | 60 |
| TCJB226M025#0150 | B | 22 | 25 | 55.0 | 6 | 150 | 3 | 753 | 677 | 489 | 113 | 102 | 73 |
| TCJC226M025#0100 | C | 22 | 25 | 55.0 | 6 | 100 | 3 | 1049 | 944 | 682 | 105 | 94 | 68 |
| TCJD226M025#0060 | D | 22 | 25 | 55.0 | 6 | 60 | 3 | 1581 | 1423 | 1028 | 95 | 85 | 62 |
| TCJD226M025#0100 | D | 22 | 25 | 55.0 | 6 | 100 | 3 | 1225 | 1102 | 796 | 122 | 110 | 80 |
| TCJY226M025#0070 | Y | 22 | 25 | 55.0 | 6 | 70 | 3 | 1336 | 1203 | 869 | 94 | 84 | 61 |
| TCJD336M025#0060 | D | 33 | 25 | 82.5 | 6 | 60 | 3 | 1581 | 1423 | 1028 | 95 | 85 | 62 |
| TCJD336M025#0100 | D | 33 | 25 | 82.5 | 6 | 100 | 3 | 1225 | 1102 | 796 | 122 | 110 | 80 |
| TCJY336M025#0070 | Y | 33 | 25 | 82.5 | 6 | 70 | 3 | 1336 | 1203 | 869 | 94 | 84 | 61 |
| TCJY336M025#0100 | Y | 33 | 25 | 82.5 | 6 | 100 | 3 | 1118 | 1006 | 727 | 112 | 101 | 73 |
| TCJD476M025#0060 | D | 47 | 25 | 117.5 | 6 | 60 | 3 | 1581 | 1423 | 1028 | 95 | 85 | 62 |
| TCJD476M025#0100 | D | 47 | 25 | 117.5 | 6 | 100 | 3 | 1225 | 1102 | 796 | 122 | 110 | 80 |
| TCJE476M025#0050 | E | 47 | 25 | 117.5 | 6 | 50 | 3 | 1817 | 1635 | 1181 | 91 | 82 | 59 |
| TCJE686M025#0050 | E | 68 | 25 | 170.0 | 6 | 50 | 3 | 1817 | 1635 | 1181 | 91 | 82 | 59 |
| 35 Volt @ 85°C (28 Volt @ 105°C) | | | | | | | | | | | | | |
| TCJB155M035#0200 | B | 1.5 | 35 | 5.3 | 6 | 200 | 3 | 652 | 587 | 424 | 130 | 117 | 85 |
| TCJB225M035#0200 | B | 2.2 | 35 | 7.7 | 6 | 200 | 3 | 652 | 587 | 424 | 130 | 117 | 85 |
| TCJB335M035#0200 | B | 3.3 | 35 | 11.6 | 6 | 200 | 3 | 652 | 587 | 424 | 130 | 117 | 85 |
| TCJB475M035#0200 | B | 4.7 | 35 | 16.5 | 6 | 200 | 3 | 652 | 587 | 424 | 130 | 117 | 85 |
| TCJC475M035#0200 | C | 4.7 | 35 | 16.5 | 6 | 200 | 3 | 742 | 667 | 482 | 148 | 133 | 96 |
| TCJC685M035#0200 | C | 6.8 | 35 | 23.8 | 6 | 200 | 3 | 742 | 667 | 482 | 148 | 133 | 96 |
| TCJB106M035#0200 | B | 10 | 35 | 35.0 | 6 | 200 | 3 | 652 | 587 | 424 | 130 | 117 | 85 |
| TCJC106M035#0200 | C | 10 | 35 | 35.0 | 6 | 200 | 3 | 742 | 667 | 482 | 148 | 133 | 96 |
| TCJC156M035#0200 | C | 15 | 35 | 52.5 | 6 | 200 | 3 | 742 | 667 | 482 | 148 | 133 | 96 |
| TCJY106M035#0070 | Y | 10 | 35 | 35.0 | 6 | 70 | 3 | 1336 | 1203 | 869 | 94 | 84 | 61 |
| TCJD156M035#0070 | D | 15 | 35 | 52.5 | 6 | 70 | 3 | 1464 | 1317 | 952 | 102 | 92 | 67 |
| TCJD156M035#0100 | D | 15 | 35 | 52.5 | 6 | 100 | 3 | 1225 | 1102 | 796 | 122 | 110 | 80 |
| TCJD226M035#0070 | D | 22 | 35 | 77.0 | 6 | 70 | 3 | 1464 | 1317 | 952 | 102 | 92 | 67 |
| TCJD226M035#0100 | D | 22 | 35 | 77.0 | 6 | 100 | 3 | 1225 | 1102 | 796 | 122 | 110 | 80 |
| TCJD336M035#0070 | D | 33 | 35 | 115.5 | 6 | 70 | 3 | 1464 | 1317 | 952 | 102 | 92 | 67 |
| TCJD336M035#0100 | D | 33 | 35 | 115.5 | 6 | 100 | 3 | 1225 | 1102 | 796 | 122 | 110 | 80 |
| TCJE336M035#0055 | E | 33 | 35 | 115.5 | 6 | 55 | 3 | 1732 | 1559 | 1126 | 95 | 86 | 62 |
| TCJE336M035#0070 | E | 33 | 35 | 115.5 | 6 | 70 | 3 | 1535 | 1382 | 998 | 107 | 97 | 70 |
| TCJE476M035#0055 | E | 47 | 35 | 164.5 | 6 | 55 | 3 | 1732 | 1559 | 1126 | 95 | 86 | 62 |
| 50 Volt @ 85°C (40 Volt @ 105°C) | | | | | | | | | | | | | |
| TCJB684M050#0400 | B | 0.68 | 50 | 3.4 | 6 | 400 | 3 | 461 | 415 | 300 | 184 | 166 | 120 |
| TCJB105M050#0300 | B | 1.0 | 50 | 5.0 | 6 | 300 | 3 | 532 | 479 | 346 | 160 | 144 | 104 |
| TCJB155M050#0300 | B | 1.5 | 50 | 7.5 | 6 | 300 | 3 | 532 | 479 | 346 | 160 | 144 | 104 |
| TCJC155M050#0300 | C | 1.5 | 50 | 7.5 | 6 | 300 | 3 | 606 | 545 | 394 | 182 | 163 | 118 |
| TCJC225M050#0300 | C | 2.2 | 50 | 11 | 6 | 300 | 3 | 606 | 545 | 394 | 182 | 163 | 118 |
| TCJC335M050#0200 | C | 3.3 | 50 | 16.5 | 8 | 200 | 3 | 742 | 667 | 482 | 148 | 133 | 96 |
| TCJC475M050#0200 | C | 4.7 | 50 | 23.5 | 8 | 200 | 3 | 742 | 667 | 482 | 148 | 133 | 96 |
| TCJC685M050#0200 | C | 6.8 | 50 | 34.0 | 8 | 200 | 3 | 742 | 667 | 482 | 148 | 133 | 96 |
| TCJD685M050#0120 | D | 6.8 | 50 | 34.0 | 10 | 120 | 3 | 1118 | 1006 | 727 | 134 | 121 | 87 |
| TCJD106M050#0120 | D | 10 | 50 | 50.0 | 10 | 120 | 3 | 1118 | 1006 | 727 | 134 | 121 | 87 |
| TCJE106M050#0070 | E | 10 | 50 | 50.0 | 6 | 70 | 3 | 1535 | 1382 | 998 | 107 | 97 | 70 |
| TCJE106M050#0100 | E | 10 | 50 | 50.0 | 6 | 100 | 3 | 1285 | 1156 | 835 | 128 | 116 | 83 |
| TCJE156M050#0070 | E | 15 | 50 | 75.0 | 6 | 70 | 3 | 1535 | 1382 | 998 | 107 | 97 | 70 |
| TCJE156M050#0100 | E | 15 | 50 | 75.0 | 6 | 100 | 3 | 1285 | 1156 | 835 | 128 | 116 | 83 |

Moisture Sensitivity Level (MSL) is defined according to J-STD-020.

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

ESR allowed to move up to 1.25 times catalog limit post mounting.

For typical weight and composition see page 126.

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.



TCJ Series



Tantalum Solid Electrolytic Chip Capacitors with Conductive Polymer Electrode

RATINGS & PART NUMBER REFERENCE

| AVX Part No. | Case Size | Capacitance (μF) | Rated Voltage (V) | DCL (μA) Max. | DF % Max. | ESR Max. (mΩ) @100kHz | MSL | 100kHz RMS Current (mA) | | | 100kHz RMS Voltage (mV) | | |
|---|-----------|------------------|-------------------|---------------|-----------|-----------------------|-----|-------------------------|------|-------|-------------------------|------|-------|
| | | | | | | | | 25°C | 85°C | 105°C | 25°C | 85°C | 105°C |
| 63 Volt @ 85°C (50.4 Volt @ 105°C) | | | | | | | | | | | | | |
| TCJB474M063#0400 | B | 0.47 | 63 | 3.0 | 8 | 400 | 3 | 461 | 415 | 300 | 184 | 166 | 120 |
| TCJB684M063#0300 | B | 0.68 | 63 | 4.3 | 8 | 300 | 3 | 532 | 479 | 346 | 160 | 144 | 104 |
| TCJB105M063#0300 | B | 1.0 | 63 | 6.3 | 8 | 300 | 3 | 532 | 479 | 346 | 160 | 144 | 104 |
| TCJC105M063#0300 | C | 1.0 | 63 | 6.3 | 6 | 300 | 3 | 606 | 545 | 394 | 182 | 163 | 118 |
| TCJC155M063#0300 | C | 1.5 | 63 | 9.5 | 6 | 300 | 3 | 606 | 545 | 394 | 182 | 163 | 118 |
| TCJC225M063#0200 | C | 2.2 | 63 | 13.9 | 6 | 200 | 3 | 742 | 667 | 482 | 148 | 133 | 96 |
| TCJC335M063#0200 | C | 3.3 | 63 | 20.8 | 6 | 200 | 3 | 742 | 667 | 482 | 148 | 133 | 96 |
| TCJC475M063#0200 | C | 4.7 | 63 | 29.6 | 6 | 200 | 3 | 742 | 667 | 482 | 148 | 133 | 96 |
| TCJD475M063#0120 | D | 4.7 | 63 | 29.6 | 6 | 120 | 3 | 1118 | 1006 | 727 | 134 | 121 | 87 |
| TCJD685M063#0120 | D | 6.8 | 63 | 42.8 | 6 | 120 | 3 | 1118 | 1006 | 727 | 134 | 121 | 87 |
| TCJE685M063#0100 | E | 6.8 | 63 | 42.8 | 6 | 100 | 3 | 1285 | 1156 | 835 | 128 | 116 | 83 |
| TCJE685M063#0150 | E | 6.8 | 63 | 42.8 | 6 | 150 | 3 | 1049 | 944 | 682 | 157 | 142 | 102 |
| TCJE106M063#0100 | E | 10 | 63 | 63.0 | 6 | 100 | 3 | 1285 | 1156 | 835 | 128 | 116 | 83 |
| TCJE106M063#0150 | E | 10 | 63 | 63.0 | 6 | 150 | 3 | 1049 | 944 | 682 | 157 | 142 | 102 |
| 75 Volt @ 85°C (60 Volt @ 105°C) | | | | | | | | | | | | | |
| TCJD475M075#0150 | D | 4.7 | 75 | 35.3 | 6 | 150 | 3 | 1000 | 900 | 650 | 150 | 135 | 98 |
| TCJD685M075#0120 | D | 6.8 | 75 | 51.0 | 6 | 120 | 3 | 1118 | 1006 | 727 | 134 | 121 | 87 |
| 100 Volt @ 85°C (80 Volt @ 105°C) | | | | | | | | | | | | | |
| TCJV685M100#0250 | V | 6.8 | 100 | 68.0 | 8 | 250 | 3 | 1000 | 900 | 650 | 250 | 225 | 163 |
| 125 Volt @ 85°C (100 Volt @ 105°C) | | | | | | | | | | | | | |
| TCJD335M125#0250 | D | 3.3 | 125 | 41.3 | 8 | 250 | 3 | 775 | 697 | 503 | 194 | 174 | 126 |

Moisture Sensitivity Level (MSL) is defined according to J-STD-020.

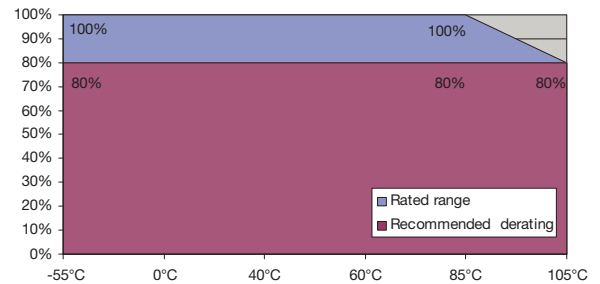
All technical data relates to an ambient temperature of +25°C. Capacitance and DF are measured at 120Hz, 0.5RMS with DC bias of 2.2 volts. DCL is measured at rated voltage after 5 minutes.

ESR allowed to move up to 1.25 times catalog limit post mounting.

For typical weight and composition see page 126.

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.

Voltage vs Temperature Rating





**Стандарт
Электрон
Связь**

Мы молодая и активно развивающаяся компания в области поставок электронных компонентов. Мы поставляем электронные компоненты отечественного и импортного производства напрямую от производителей и с крупнейших складов мира.

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