



**THE DATASHEET OF  
TCJK476M006R0150**



# TCJ Series



## Conductive Polymer Solid Electrolytic Chip Capacitors

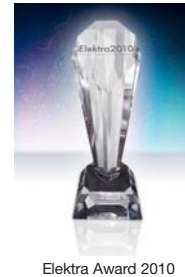


### FEATURES

- Conductive polymer electrode
- Benign failure mode under recommended use conditions
- Lower ESR
- 3x reflow 260°C compatible
- CV range: 0.47-470µF / 2.5-125V
- 18 case sizes available

### APPLICATIONS

- Smart phone, Tablets, Notebook, LCD TV, Power supplies



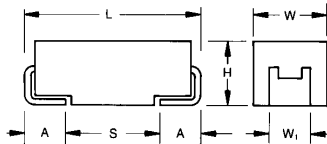
Elektra Award 2010



LEAD-FREE  
LEAD-FREE COMPATIBLE  
COMPONENT

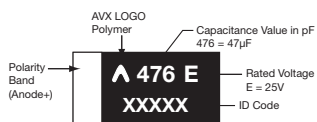
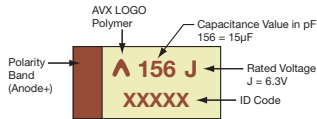


RoHS  
COMPLIANT

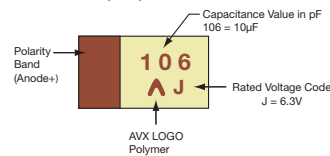


### MARKING

A, B, C, D, E, G, H, K, S, T,  
U, W, X, Y, 5 CASE



N, P, R CASE



### CASE DIMENSIONS: millimeters (inches)

| 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) | W1±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 (0.053)                 | 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) |
| U    | 2924     | 7361-43    | 7.30 (0.287)   | 6.10 (0.240)                 | 4.10 (0.162)                 | 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) |
| X    | 2917     | 7343-15    | 7.30 (0.287)   | 4.30 (0.169)                 | 1.50 (0.059) max             | 2.40 (0.094)            | 1.30 (0.051)                 | 4.40 (0.173) |
| 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) |
| 5    | 2917     | 7343-40    | 7.30 (0.287)   | 4.30 (0.169)                 | 3.80 (0.150)                 | 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

|             |                                     |   |                              |   |   |                  |  |
|-------------|-------------------------------------|---|------------------------------|---|---|------------------|--|
| <b>TCJ</b>  | <b>A</b>                            | <b>226</b>  | <b>M</b>                     | <b>004</b>  | <b>R</b>  | <b>0300</b>      | <b>E</b>                                       |
| <b>Type</b> | <b>Case Size</b><br>See table above | <b>Capacitance Code</b><br>pF code: 1st two digits represent significant figures, 3rd digit represents multiplier (number of zeros to follow) | <b>Tolerance</b><br>M = ±20% | <b>Rated DC Voltage</b><br>002 = 2.5Vdc<br>004 = 4Vdc<br>006 = 6.3Vdc<br>010 = 10Vdc<br>016 = 16Vdc<br>020 = 20Vdc<br>025 = 25Vdc<br>035 = 35Vdc<br>050 = 50Vdc<br>063 = 63Vdc<br>075 = 75Vdc<br>100 = 100Vdc<br>125 = 125Vdc | <b>Packaging</b><br>R = Pure Tin 7" Reel<br>S = Pure Tin 13" Reel | <b>ESR in mΩ</b> | <b>Additional Character</b><br>E = Black resin |

### TECHNICAL SPECIFICATIONS (Common for all TCJ series)

|                               |  |
|-------------------------------|--|
| Technical Data:               | All technical data relate to an ambient temperature of +25°C                                 |
| Capacitance Tolerance:        | ±20%   |
| Leakage Current DCL:          | 0.1CV  |
| Reliability:                  | 1% per 1000 hours at 85°C, V <sub>R</sub> with 0.1Ω/V series impedance, 60% confidence level |
| Resistance to soldering heat: | 3x260°C peak for max. 10s reflow   |

NOTE: Conductive Polymer Capacitors are designed to operate within the limits of the environmental conditions specified for each series. If operated continuously at their maximum temperature and / or humidity limit, or beyond these limits, capacitors may exhibit a parametric shift in capacitance and increases in ESR. These changes may occur earlier if the specified environmental conditions are exceeded. Similarly, their normal operational time period will be significantly extended if their general duty cycle includes operation below maximum temperature within humidity controlled environments. Careful attention should be paid to maximum temperature with associated high humidity environments as well as voltage derating, ripple current and current surges. Please reference the AVX Conductive Polymer Capacitor Guidelines for more information or contact factory for application assistance.



## Conductive Polymer Solid Electrolytic Chip Capacitors

### CAPACITANCE AND RATED VOLTAGE RANGE (LETTER DENOTES CASE SIZE)

| Cap  |      | Rated Voltage DC (V <sub>R</sub> ) 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  |  |  |   |                                     |  |                            | P(500)                                   |  | B(300)                     | B(300)<br>C(300)     |         |          |          |
| 1.5  | 155  |  |  |   |                                     |  |                            |  | B(200)                                   | B(300)<br>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  |  |  |   | K(300,500)<br>R(500)                |  |                            | B(100,150)                               | B(200)<br>C(200)                         | C(200)<br>X(250)<br>Y(250) | C(200)<br>D(120)     | D(150)  | D(250)   |          |
| 6.8  | 685  |  |  |   |                                     | A(200)                                 |                            | A(150), B(90,150)<br>T(100,150)          | C(200)                                   | C(200)<br>D(120)           | D(120)<br>E(100,150) | D(120)  |          |          |
| 10   | 106  |  |  | A(300)<br>N(200,250,500)<br>R(500)  | A(200,300)                          | A(200)<br>B(100,200)<br>T(100,150,200) | A(150)                     | A(150)<br>B(90,100,150)                  | B(200)<br>C(200)<br>Y(70)                | D(90,120)<br>E(70,100)     | E(100,150)           |         |          |          |
| 15   | 156  |  | A(300)   | A(300)  | A(200)                              | B(150)                                 |                            | B(100,150)<br>Y(90)                      | B(200), C(200)<br>D(70,100)<br>Y(70,100) | E(70,100)                  |                      |         |          |          |
| 22   | 226  |  | A(300)   | A(300), K(400)<br>N(500), R(500)<br>S(400), T(150)                          | B(300)<br>T(70,150)                 | A(300)<br>B(150)                       | B(90,150)<br>Y(70)         | B(100,150), C(100)<br>D(60,100)<br>Y(70) | D(70,100)<br>Y(150)                      |                            |                      |         |          |          |
| 33   | 336  |  | A(300)   | A(200)<br>B(70,200)<br>T(150)   | B(70,200)<br>C(100)<br>T(70,150)    | A(200)<br>H(150)<br>Y(45,60,70)        | Y(70)                      | D(60,100)<br>X(70,100)<br>Y(60,70,100)   | D(70,100)<br>E(55,70)<br>U(70), Y(100)   |                            |                      |         |          |          |
| 47   | 476  |  | A(200)<br>T(80)                                    | A(70,100,200), B(70)<br>K(150,200,400)<br>P(500), R(500)<br>T(55,70,80,120) | B(70)<br>C(100)<br>H(100)           | X(45,70)<br>Y(45,70)                   | D(55)<br>X(55,70)<br>Y(70) | D(60,100)<br>E(50)<br>Y(100)             | E(55), U(70)<br>Y(100)                   |                            |                      |         |          |          |
| 68   | 686  | A(250)                                     | A(250)<br>B(70)<br>T(80)                           | B(55,70)<br>C(100), H(100)<br>T(200), W(70)                                 | D(45,55)<br>Y(45,55)                | D(50)<br>Y(50)                         | D(55)<br>E(45)<br>Y(50)    | D(70)<br>E(50)<br>Y(100)                 |  |                            |                      |         |          |          |
| 100  | 107  | A(200), B(70)                              | A(200)<br>B(40,70)<br>G(300)<br>T(70,150)          | A(100,150)<br>B(40,45,55,70)<br>T(70,200)                                   | D(18,25,45,55,80)<br>Y(18,25,45,55) | D(50), E(40)<br>Y(50)                  | D(55)<br>E(45)<br>Y(55)    | D(55,70)<br>E(80)<br>U(70)               |  |                            |                      |         |          |          |
| 150  | 157  | B(70)                                      | B(70), D(15)<br>Y(15,25,45)                        | B(25,35,45,55,70)<br>D(12,15,25,40)<br>H(200), W(40,70)<br>Y(15,25,40)      | D(25,40,45,55)<br>Y(25,40,45,55)    | D(40,50,70)<br>E(40)<br>Y(40,50,70)    |                            | U(70)                                    |  |                            |                      |         |          |          |
| 220  | 227  | B(35,45,70)                                | B(35,45,55,60,70)<br>D(12,15,25,40)<br>Y(15,25,40) | B(70,200)<br>D(12,15,25,35,40,50)<br>H(170)<br>Y(15,25,35,40,50)            | D(15,25,40,50)<br>Y(15,25,40,50)    | D(50)                                  | U(70)                      |  |  |                            |                      |         |          |          |
| 330  | 337  | B(35,45,70)<br>Y(25,40)                    | D(15,25,40,50)<br>Y(15,25,40,50)                   | D(12,15,18,25,40,50)<br>Y(15,25,40,50)                                      | D(25)<br>5(35,100)                  | E(50,70)<br>5(100)                     |                            |  |  |                            |                      |         |          |          |
| 470  | 477  | D(12,15,25,40,50)<br>Y(15,25,40,50)        | D(10,12,15,25,40,50)<br>Y(15,25,40,50)             | D(25)<br>X(50,55,100)   |                                     | 5(100)                                 |                            |  |  |                            |                      |         |          |          |

Released ratings, (ESR ratings in mOhms in parentheses)

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

# TCJ Series



## Conductive Polymer Solid Electrolytic Chip Capacitors

### RATINGS & PART NUMBER REFERENCE

| AVX Part No.           | Case Size | Capacitance (µF) | Rated Voltage (V) | Maximum Operating Temperature (°C) | DCL Max. (µA) | DF Max. (%) | ESR Max. @ 100kHz (mΩ) | 100kHz RMS Current (mA) |      |       |       | Product Category | MSL |
|------------------------|-----------|------------------|-------------------|------------------------------------|---------------|-------------|------------------------|-------------------------|------|-------|-------|------------------|-----|
|                        |           |                  |                   |                                    |               |             |                        | 45°C                    | 85°C | 105°C | 125°C |                  |     |
| <b>2.5 Volt @ 85°C</b> |           |                  |                   |                                    |               |             |                        |                         |      |       |       |                  |     |
| TCJA686M002#0250E      | A         | 68               | 2.5               | 105                                | 17            | 6           | 250                    | 600                     | 400  | 300   | –     | 3                | 3   |
| TCJA107M002#0200E      | A         | 100              | 2.5               | 105                                | 25            | 6           | 200                    | 700                     | 500  | 300   | –     | 3                | 3   |
| TCJB107M002#0070E      | B         | 100              | 2.5               | 125                                | 25            | 6           | 70                     | 1300                    | 900  | 600   | 300   | 1                | 3   |
| TCJB157M002#0070E      | B         | 150              | 2.5               | 105                                | 37.5          | 6           | 70                     | 1300                    | 900  | 600   | –     | 3                | 3   |
| TCJB227M002#0035E      | B         | 220              | 2.5               | 105                                | 55            | 8           | 35                     | 1900                    | 1300 | 900   | –     | 3                | 3   |
| TCJB227M002#0045E      | B         | 220              | 2.5               | 105                                | 55            | 8           | 45                     | 1700                    | 1200 | 800   | –     | 3                | 3   |
| TCJB227M002#0070E      | B         | 220              | 2.5               | 105                                | 55            | 8           | 70                     | 1300                    | 900  | 600   | –     | 3                | 3   |
| TCJB337M002#0035E      | B         | 330              | 2.5               | 105                                | 82.5          | 8           | 35                     | 1900                    | 1300 | 900   | –     | 3                | 3   |
| TCJB337M002#0045E      | B         | 330              | 2.5               | 105                                | 82.5          | 8           | 45                     | 1700                    | 1200 | 800   | –     | 3                | 3   |
| TCJB337M002#0070E      | B         | 330              | 2.5               | 105                                | 82.5          | 8           | 70                     | 1300                    | 900  | 600   | –     | 3                | 3   |
| TCJY337M002#0025E      | Y         | 330              | 2.5               | 105                                | 82.5          | 6           | 25                     | 2700                    | 1900 | 1200  | –     | 2                | 3   |
| TCJY337M002#0040E      | Y         | 330              | 2.5               | 105                                | 82.5          | 6           | 40                     | 2200                    | 1500 | 1000  | –     | 3                | 3   |
| TCJD477M002#0012       | D         | 470              | 2.5               | 105                                | 117.5         | 6           | 12                     | 4300                    | 3000 | 1900  | –     | 2                | 3   |
| TCJD477M002#0015E      | D         | 470              | 2.5               | 105                                | 117.5         | 6           | 15                     | 3900                    | 2700 | 1800  | –     | 2                | 3   |
| TCJD477M002#0025E      | D         | 470              | 2.5               | 105                                | 117.5         | 6           | 25                     | 3000                    | 2100 | 1400  | –     | 2                | 3   |
| TCJD477M002#0040E      | D         | 470              | 2.5               | 105                                | 117.5         | 6           | 40                     | 2400                    | 1700 | 1100  | –     | 3                | 3   |
| TCJD477M002#0050E      | D         | 470              | 2.5               | 105                                | 117.5         | 6           | 50                     | 2100                    | 1500 | 900   | –     | 3                | 3   |
| TCJY477M002#0015       | Y         | 470              | 2.5               | 85                                 | 117.5         | 6           | 15                     | 3500                    | 2500 | –     | –     | 5                | 3   |
| TCJY477M002#0025E      | Y         | 470              | 2.5               | 105                                | 117.5         | 6           | 25                     | 2700                    | 1900 | 1200  | –     | 3                | 3   |
| TCJY477M002#0040E      | Y         | 470              | 2.5               | 105                                | 117.5         | 6           | 40                     | 2200                    | 1500 | 1000  | –     | 3                | 3   |
| TCJY477M002#0050E      | Y         | 470              | 2.5               | 105                                | 117.5         | 6           | 50                     | 1900                    | 1300 | 900   | –     | 3                | 3   |
| <b>4 Volt @ 85°C</b>   |           |                  |                   |                                    |               |             |                        |                         |      |       |       |                  |     |
| TCJA156M004#0300E      | A         | 15               | 4                 | 125                                | 6             | 6           | 300                    | 600                     | 400  | 300   | 200   | 1                | 3   |
| TCJA226M004#0300E      | A         | 22               | 4                 | 125                                | 8.8           | 6           | 300                    | 600                     | 400  | 300   | 200   | 1                | 3   |
| TCJA336M004#0300E      | A         | 33               | 4                 | 125                                | 13.2          | 6           | 300                    | 600                     | 400  | 300   | 200   | 1                | 3   |
| TCJA476M004#0200E      | A         | 47               | 4                 | 105                                | 18.8          | 6           | 200                    | 700                     | 500  | 300   | –     | 3                | 3   |
| TCJT476M004#0080E      | T         | 47               | 4                 | 105                                | 18.8          | 8           | 80                     | 1100                    | 800  | 500   | –     | 3                | 3   |
| TCJA686M004#0250E      | A         | 68               | 4                 | 105                                | 27.2          | 6           | 250                    | 600                     | 400  | 300   | –     | 3                | 3   |
| TCJB686M004#0070E      | B         | 68               | 4                 | 125                                | 27.2          | 6           | 70                     | 1300                    | 900  | 600   | 300   | 1                | 3   |
| TCJT686M004#0080E      | T         | 68               | 4                 | 105                                | 27.2          | 8           | 80                     | 1100                    | 800  | 500   | –     | 3                | 3   |
| TCJA107M004#0200E      | A         | 100              | 4                 | 105                                | 40            | 6           | 200                    | 700                     | 500  | 300   | –     | 3                | 3   |
| TCJB107M004#0040E      | B         | 100              | 4                 | 105                                | 40            | 8           | 40                     | 1800                    | 1300 | 800   | –     | 3                | 3   |
| TCJB107M004#0070E      | B         | 100              | 4                 | 125                                | 40            | 8           | 70                     | 1300                    | 900  | 600   | 300   | 1                | 3   |
| TCJG107M004#0300E      | G         | 100              | 4                 | 105                                | 40            | 10          | 300                    | 600                     | 400  | 300   | –     | 3                | 3   |
| TCJT107M004#0070E      | T         | 100              | 4                 | 105                                | 40            | 8           | 70                     | 1200                    | 800  | 500   | –     | 3                | 3   |
| TCJT107M004#0150E      | T         | 100              | 4                 | 105                                | 40            | 8           | 150                    | 800                     | 600  | 400   | –     | 3                | 3   |
| TCJB157M004#0070E      | B         | 150              | 4                 | 105                                | 60            | 6           | 70                     | 1300                    | 900  | 600   | –     | 3                | 3   |
| TCJD157M004#0015       | D         | 150              | 4                 | 105                                | 60            | 6           | 15                     | 3900                    | 2700 | 1800  | –     | 2                | 3   |
| TCJY157M004#0015       | Y         | 150              | 4                 | 105                                | 60            | 6           | 15                     | 3500                    | 2500 | 1600  | –     | 2                | 3   |
| TCJY157M004#0025E      | Y         | 150              | 4                 | 105                                | 60            | 6           | 25                     | 2700                    | 1900 | 1200  | –     | 2                | 3   |
| TCJY157M004#0045E      | Y         | 150              | 4                 | 105                                | 60            | 6           | 45                     | 2000                    | 1400 | 900   | –     | 3                | 3   |
| TCJB227M004#0035E      | B         | 220              | 4                 | 105                                | 88            | 10          | 35                     | 1900                    | 1300 | 900   | –     | 3                | 3   |
| TCJB227M004#0045E      | B         | 220              | 4                 | 105                                | 88            | 10          | 45                     | 1700                    | 1200 | 800   | –     | 3                | 3   |
| TCJB227M004#0055       | B         | 220              | 4                 | 105                                | 88            | 10          | 55                     | 1500                    | 1100 | 700   | –     | 3                | 3   |
| TCJB227M004#0060E      | B         | 220              | 4                 | 105                                | 88            | 10          | 60                     | 1400                    | 1000 | 600   | –     | 3                | 3   |
| TCJB227M004#0070E      | B         | 220              | 4                 | 105                                | 88            | 10          | 70                     | 1300                    | 900  | 600   | –     | 3                | 3   |
| TCJD227M004#0012       | D         | 220              | 4                 | 105                                | 88            | 6           | 12                     | 4300                    | 3000 | 1900  | –     | 2                | 3   |
| TCJD227M004#0015E      | D         | 220              | 4                 | 105                                | 88            | 6           | 15                     | 3900                    | 2700 | 1800  | –     | 2                | 3   |
| TCJD227M004#0025E      | D         | 220              | 4                 | 105                                | 88            | 6           | 25                     | 3000                    | 2100 | 1400  | –     | 2                | 3   |
| TCJD227M004#0040E      | D         | 220              | 4                 | 105                                | 88            | 6           | 40                     | 2400                    | 1700 | 1100  | –     | 2                | 3   |
| TCJY227M004#0015       | Y         | 220              | 4                 | 105                                | 88            | 6           | 15                     | 3500                    | 2500 | 1600  | –     | 2                | 3   |
| TCJY227M004#0025E      | Y         | 220              | 4                 | 105                                | 88            | 6           | 25                     | 2700                    | 1900 | 1200  | –     | 2                | 3   |
| TCJY227M004#0040E      | Y         | 220              | 4                 | 105                                | 88            | 6           | 40                     | 2200                    | 1500 | 1000  | –     | 3                | 3   |
| TCJD337M004#0015E      | D         | 330              | 4                 | 105                                | 132           | 6           | 15                     | 3900                    | 2700 | 1800  | –     | 2                | 3   |
| TCJD337M004#0025E      | D         | 330              | 4                 | 105                                | 132           | 6           | 25                     | 3000                    | 2100 | 1400  | –     | 2                | 3   |
| TCJD337M004#0040E      | D         | 330              | 4                 | 105                                | 132           | 6           | 40                     | 2400                    | 1700 | 1100  | –     | 3                | 3   |
| TCJD337M004#0050E      | D         | 330              | 4                 | 105                                | 132           | 6           | 50                     | 2100                    | 1500 | 900   | –     | 3                | 3   |
| TCJY337M004#0015       | Y         | 330              | 4                 | 85                                 | 132           | 6           | 15                     | 3500                    | 2500 | –     | –     | 5                | 3   |
| TCJY337M004#0025E      | Y         | 330              | 4                 | 105                                | 132           | 6           | 25                     | 2700                    | 1900 | 1200  | –     | 3                | 3   |
| TCJY337M004#0040E      | Y         | 330              | 4                 | 105                                | 132           | 6           | 40                     | 2200                    | 1500 | 1000  | –     | 3                | 3   |
| TCJY337M004#0050E      | Y         | 330              | 4                 | 105                                | 132           | 6           | 50                     | 1900                    | 1300 | 900   | –     | 3                | 3   |
| TCJD477M004#0010       | D         | 470              | 4                 | 105                                | 188           | 6           | 10                     | 4700                    | 3300 | 2100  | –     | 2                | 3   |
| TCJD477M004#0012       | D         | 470              | 4                 | 105                                | 188           | 6           | 12                     | 4300                    | 3000 | 1900  | –     | 2                | 3   |
| TCJD477M004#0015E      | D         | 470              | 4                 | 105                                | 188           | 6           | 15                     | 3900                    | 2700 | 1800  | –     | 2                | 3   |
| TCJD477M004#0025E      | D         | 470              | 4                 | 105                                | 188           | 6           | 25                     | 3000                    | 2100 | 1400  | –     | 2                | 3   |
| TCJD477M004#0040E      | D         | 470              | 4                 | 105                                | 188           | 6           | 40                     | 2400                    | 1700 | 1100  | –     | 2                | 3   |
| TCJD477M004#0050E      | D         | 470              | 4                 | 105                                | 188           | 6           | 50                     | 2100                    | 1500 | 900   | –     | 2                | 3   |
| TCJY477M004#0015       | Y         | 470              | 4                 | 85                                 | 188           | 6           | 15                     | 3500                    | 2500 | –     | –     | 5                | 3   |
| TCJY477M004#0025E      | Y         | 470              | 4                 | 105                                | 188           | 6           | 25                     | 2700                    | 1900 | 1200  | –     | 3                | 3   |
| TCJY477M004#0040E      | Y         | 470              | 4                 | 105                                | 188           | 6           | 40                     | 2200                    | 1500 | 1000  | –     | 3                | 3   |
| TCJY477M004#0050E      | Y         | 470              | 4                 | 105                                | 188           | 6           | 50                     | 1900                    | 1300 | 900   | –     | 3                | 3   |
| <b>6.3 Volt @ 85°C</b> |           |                  |                   |                                    |               |             |                        |                         |      |       |       |                  |     |
| TCJA106M006#0300E      | A         | 10               | 6.3               | 125                                | 6             | 6           | 300                    | 600                     | 400  | 300   | 200   | 1                | 3   |
| TCJN106M006#0200E      | N         | 10               | 6.3               | 105                                | 6             | 6           | 200                    | 600                     | 400  | 300   | –     | 3                | 3   |
| TCJN106M006#0250E      | N         | 10               | 6.3               | 105                                | 6             | 6           | 250                    | 600                     | 400  | 300   | –     | 3                | 3   |
| TCJN106M006#0500E      | N         | 10               | 6.3               | 105                                | 6             | 6           | 500                    | 400                     | 300  | 200   | –     | 3                | 3   |
| TCJR106M006#0500E      | R         | 10               | 6.3               | 105                                | 6             | 6           | 500                    | 400                     | 300  | 200   | –     | 3                | 3   |

### RATINGS & PART NUMBER REFERENCE

| AVX Part No.      | Case Size | Capacitance (µF) | Rated Voltage (V) | Maximum Operating Temperature (°C) | DCL Max. (µA) | DF Max. (%) | ESR Max. @ 100kHz (mΩ) | 100kHz RMS Current (mA) |      |       |       | Product Category | MSL |
|-------------------|-----------|------------------|-------------------|------------------------------------|---------------|-------------|------------------------|-------------------------|------|-------|-------|------------------|-----|
|                   |           |                  |                   |                                    |               |             |                        | 45°C                    | 85°C | 105°C | 125°C |                  |     |
| TCJA156M006#0300E | A         | 15               | 6.3               | 125                                | 9             | 6           | 300                    | 600                     | 400  | 300   | 200   | 1                | 3   |
| TCJA226M006#0300E | A         | 22               | 6.3               | 125                                | 13.2          | 6           | 300                    | 600                     | 400  | 300   | 200   | 1                | 3   |
| TCJK226M006#0400E | K         | 22               | 6.3               | 105                                | 13.2          | 8           | 400                    | 500                     | 400  | 200   | -     | 3                | 3   |
| TCJN226M006#0500E | N         | 22               | 6.3               | 105                                | 13.2          | 10          | 500                    | 400                     | 300  | 200   | -     | 3                | 3   |
| TCJR226M006#0500E | R         | 22               | 6.3               | 105                                | 13.2          | 10          | 500                    | 400                     | 300  | 200   | -     | 3                | 3   |
| TCJS226M006#0400E | S         | 22               | 6.3               | 105                                | 13.2          | 8           | 400                    | 500                     | 400  | 200   | -     | 3                | 3   |
| TCJT226M006#0150E | T         | 22               | 6.3               | 105                                | 13.2          | 6           | 150                    | 800                     | 600  | 400   | -     | 3                | 3   |
| TCJA336M006#0200E | A         | 33               | 6.3               | 105                                | 19.8          | 6           | 200                    | 700                     | 500  | 300   | -     | 3                | 3   |
| TCJB336M006#0070E | B         | 33               | 6.3               | 125                                | 19.8          | 6           | 70                     | 1300                    | 900  | 600   | 300   | 1                | 3   |
| TCJB336M006#0200E | B         | 33               | 6.3               | 125                                | 19.8          | 6           | 200                    | 800                     | 600  | 400   | 200   | 1                | 3   |
| TCJT336M006#0150E | T         | 33               | 6.3               | 105                                | 19.8          | 8           | 150                    | 800                     | 600  | 400   | -     | 3                | 3   |
| TCJA476M006#0070E | A         | 47               | 6.3               | 105                                | 28.2          | 6           | 70                     | 1200                    | 800  | 500   | -     | 3                | 3   |
| TCJA476M006#0100E | A         | 47               | 6.3               | 105                                | 28.2          | 6           | 100                    | 1000                    | 700  | 500   | -     | 3                | 3   |
| TCJA476M006#0200E | A         | 47               | 6.3               | 105                                | 28.2          | 6           | 200                    | 700                     | 500  | 300   | -     | 3                | 3   |
| TCJB476M006#0070E | B         | 47               | 6.3               | 125                                | 28.2          | 6           | 70                     | 1300                    | 900  | 600   | 300   | 1                | 3   |
| TCJK476M006#0150E | K         | 47               | 6.3               | 105                                | 28.2          | 6           | 150                    | 800                     | 600  | 400   | -     | 3                | 3   |
| TCJK476M006#0200E | K         | 47               | 6.3               | 105                                | 28.2          | 6           | 200                    | 700                     | 500  | 300   | -     | 3                | 3   |
| TCJK476M006#0400E | K         | 47               | 6.3               | 105                                | 28.2          | 6           | 400                    | 500                     | 400  | 200   | -     | 3                | 3   |
| TCJP476M006#0500E | P         | 47               | 6.3               | 105                                | 28.2          | 10          | 500                    | 400                     | 300  | 200   | -     | 3                | 3   |
| TCJR476M006#0500E | R         | 47               | 6.3               | 105                                | 28.2          | 10          | 500                    | 400                     | 300  | 200   | -     | 3                | 3   |
| TCJT476M006#0055E | T         | 47               | 6.3               | 105                                | 28.2          | 8           | 55                     | 1300                    | 900  | 600   | -     | 3                | 3   |
| TCJT476M006#0070E | T         | 47               | 6.3               | 105                                | 28.2          | 8           | 70                     | 1200                    | 800  | 500   | -     | 3                | 3   |
| TCJT476M006#0080E | T         | 47               | 6.3               | 105                                | 28.2          | 8           | 80                     | 1100                    | 800  | 500   | -     | 3                | 3   |
| TCJT476M006#0120E | T         | 47               | 6.3               | 105                                | 28.2          | 8           | 120                    | 900                     | 600  | 400   | -     | 3                | 3   |
| TCJB686M006#0055E | B         | 68               | 6.3               | 125                                | 40.8          | 8           | 55                     | 1500                    | 1100 | 700   | 400   | 1                | 3   |
| TCJB686M006#0070E | B         | 68               | 6.3               | 125                                | 40.8          | 8           | 70                     | 1300                    | 900  | 600   | 300   | 1                | 3   |
| TCJC686M006#0100E | C         | 68               | 6.3               | 125                                | 40.8          | 6           | 100                    | 1300                    | 900  | 600   | 300   | 1                | 3   |
| TCJH686M006#0100E | H         | 68               | 6.3               | 105                                | 40.8          | 6           | 100                    | 1000                    | 700  | 500   | -     | 3                | 3   |
| TCJT686M006#0200E | T         | 68               | 6.3               | 105                                | 40.8          | 8           | 200                    | 700                     | 500  | 300   | -     | 3                | 3   |
| TCJW686M006#0070E | W         | 68               | 6.3               | 125                                | 40.8          | 8           | 70                     | 1400                    | 1000 | 600   | 400   | 1                | 3   |
| TCJA107M006#0100E | A         | 100              | 6.3               | 105                                | 60            | 10          | 100                    | 1000                    | 700  | 500   | -     | 3                | 3   |
| TCJA107M006#0150E | A         | 100              | 6.3               | 105                                | 60            | 10          | 150                    | 800                     | 600  | 400   | -     | 3                | 3   |
| TCJB107M006#0040E | B         | 100              | 6.3               | 105                                | 60            | 10          | 40                     | 1800                    | 1300 | 800   | -     | 3                | 3   |
| TCJB107M006#0045E | B         | 100              | 6.3               | 105                                | 60            | 10          | 45                     | 1700                    | 1200 | 800   | -     | 3                | 3   |
| TCJB107M006#0055E | B         | 100              | 6.3               | 105                                | 60            | 10          | 55                     | 1500                    | 1100 | 700   | -     | 3                | 3   |
| TCJB107M006#0070E | B         | 100              | 6.3               | 105                                | 60            | 10          | 70                     | 1300                    | 900  | 600   | -     | 3                | 3   |
| TCJT107M006#0070E | T         | 100              | 6.3               | 105                                | 60            | 10          | 70                     | 1200                    | 800  | 500   | -     | 3                | 3   |
| TCJT107M006#0200E | T         | 100              | 6.3               | 105                                | 60            | 10          | 200                    | 700                     | 500  | 300   | -     | 3                | 3   |
| TCJB157M006#0025E | B         | 150              | 6.3               | 105                                | 90            | 10          | 25                     | 2200                    | 1500 | 1000  | -     | 3                | 3   |
| TCJB157M006#0035E | B         | 150              | 6.3               | 105                                | 90            | 10          | 35                     | 1900                    | 1300 | 900   | -     | 3                | 3   |
| TCJB157M006#0045E | B         | 150              | 6.3               | 105                                | 90            | 10          | 45                     | 1700                    | 1200 | 800   | -     | 3                | 3   |
| TCJB157M006#0055E | B         | 150              | 6.3               | 105                                | 90            | 10          | 55                     | 1500                    | 1100 | 700   | -     | 3                | 3   |
| TCJB157M006#0070E | B         | 150              | 6.3               | 105                                | 90            | 10          | 70                     | 1300                    | 900  | 600   | -     | 3                | 3   |
| TCJD157M006#0012  | D         | 150              | 6.3               | 105                                | 90            | 6           | 12                     | 4300                    | 3000 | 1900  | -     | 2                | 3   |
| TCJD157M006#0015E | D         | 150              | 6.3               | 105                                | 90            | 6           | 15                     | 3900                    | 2700 | 1800  | -     | 2                | 3   |
| TCJD157M006#0025E | D         | 150              | 6.3               | 105                                | 90            | 6           | 25                     | 3000                    | 2100 | 1400  | -     | 2                | 3   |
| TCJD157M006#0040E | D         | 150              | 6.3               | 105                                | 90            | 6           | 40                     | 2400                    | 1700 | 1100  | -     | 2                | 3   |
| TCJH157M006#0200E | H         | 150              | 6.3               | 105                                | 90            | 6           | 200                    | 700                     | 500  | 300   | -     | 3                | 3   |
| TCJW157M006#0040E | W         | 150              | 6.3               | 105                                | 90            | 6           | 40                     | 1800                    | 1300 | 800   | -     | 3                | 3   |
| TCJW157M006#0070E | W         | 150              | 6.3               | 105                                | 90            | 6           | 70                     | 1400                    | 1000 | 600   | -     | 3                | 3   |
| TCJY157M006#0015  | Y         | 150              | 6.3               | 105                                | 90            | 6           | 15                     | 3500                    | 2500 | 1600  | -     | 2                | 3   |
| TCJY157M006#0025E | Y         | 150              | 6.3               | 105                                | 90            | 6           | 25                     | 2700                    | 1900 | 1200  | -     | 2                | 3   |
| TCJY157M006#0040E | Y         | 150              | 6.3               | 105                                | 90            | 6           | 40                     | 2200                    | 1500 | 1000  | -     | 3                | 3   |
| TCJB227M006#0070E | B         | 220              | 6.3               | 105                                | 132           | 10          | 70                     | 1300                    | 900  | 600   | -     | 3                | 3   |
| TCJB227M006#0200E | B         | 220              | 6.3               | 105                                | 132           | 10          | 200                    | 800                     | 600  | 400   | -     | 3                | 3   |
| TCJD227M006#0012  | D         | 220              | 6.3               | 105                                | 132           | 6           | 12                     | 4300                    | 3000 | 1900  | -     | 2                | 3   |
| TCJD227M006#0015E | D         | 220              | 6.3               | 105                                | 132           | 6           | 15                     | 3900                    | 2700 | 1800  | -     | 2                | 3   |
| TCJD227M006#0025E | D         | 220              | 6.3               | 105                                | 132           | 6           | 25                     | 3000                    | 2100 | 1400  | -     | 2                | 3   |
| TCJD227M006#0035E | D         | 220              | 6.3               | 105                                | 132           | 6           | 35                     | 2500                    | 1800 | 1100  | -     | 3                | 3   |
| TCJD227M006#0040E | D         | 220              | 6.3               | 105                                | 132           | 6           | 40                     | 2400                    | 1700 | 1100  | -     | 3                | 3   |
| TCJD227M006#0050E | D         | 220              | 6.3               | 105                                | 132           | 6           | 50                     | 2100                    | 1500 | 900   | -     | 3                | 3   |
| TCJH227M006#0170E | H         | 220              | 6.3               | 105                                | 132           | 10          | 170                    | 800                     | 600  | 400   | -     | 3                | 3   |
| TCJY227M006#0015  | Y         | 220              | 6.3               | 85                                 | 132           | 6           | 15                     | 3500                    | 2500 | -     | -     | 5                | 3   |
| TCJY227M006#0025E | Y         | 220              | 6.3               | 105                                | 132           | 6           | 25                     | 2700                    | 1900 | 1200  | -     | 2                | 3   |
| TCJY227M006#0035E | Y         | 220              | 6.3               | 105                                | 132           | 6           | 35                     | 2300                    | 1600 | 1000  | -     | 2                | 3   |
| TCJY227M006#0040E | Y         | 220              | 6.3               | 105                                | 132           | 6           | 40                     | 2200                    | 1500 | 1000  | -     | 2                | 3   |
| TCJY227M006#0050E | Y         | 220              | 6.3               | 105                                | 132           | 6           | 50                     | 1900                    | 1300 | 900   | -     | 2                | 3   |
| TCJD337M006#0012  | D         | 330              | 6.3               | 105                                | 198           | 6           | 12                     | 4300                    | 3000 | 1900  | -     | 3                | 3   |
| TCJD337M006#0015E | D         | 330              | 6.3               | 105                                | 198           | 6           | 15                     | 3900                    | 2700 | 1800  | -     | 3                | 3   |
| TCJD337M006#0018E | D         | 330              | 6.3               | 105                                | 198           | 6           | 18                     | 3500                    | 2500 | 1600  | -     | 3                | 3   |
| TCJD337M006#0025E | D         | 330              | 6.3               | 105                                | 198           | 6           | 25                     | 3000                    | 2100 | 1400  | -     | 3                | 3   |
| TCJD337M006#0040E | D         | 330              | 6.3               | 105                                | 198           | 6           | 40                     | 2400                    | 1700 | 1100  | -     | 2                | 3   |
| TCJD337M006#0050E | D         | 330              | 6.3               | 105                                | 198           | 6           | 50                     | 2100                    | 1500 | 900   | -     | 2                | 3   |
| TCJY337M006#0015  | Y         | 330              | 6.3               | 85                                 | 198           | 12          | 15                     | 3500                    | 2500 | -     | -     | 5                | 3   |
| TCJY337M006#0025E | Y         | 330              | 6.3               | 105                                | 198           | 12          | 25                     | 2700                    | 1900 | 1200  | -     | 3                | 3   |
| TCJY337M006#0040E | Y         | 330              | 6.3               | 105                                | 198           | 12          | 40                     | 2200                    | 1500 | 1000  | -     | 3                | 3   |
| TCJY337M006#0050E | Y         | 330              | 6.3               | 105                                | 198           | 12          | 50                     | 1900                    | 1300 | 900   | -     | 3                | 3   |
| TCJD477M006#0025E | D         | 470              | 6.3               | 105                                | 282           | 6           | 25                     | 3000                    | 2100 | 1400  | -     | 2                | 3   |
| TCJX477M006#0050  | X         | 470              | 6.3               | 105                                | 282           | 6           | 50                     | 1900                    | 1300 | 900   | -     | 3                | 3   |
| TCJX477M006#0055E | X         | 470              | 6.3               | 105                                | 282           | 6           | 55                     | 1800                    | 1300 | 800   | -     | 3                | 3   |
| TCJX477M006#0100E | X         | 470              | 6.3               | 105                                | 282           | 6           | 100                    | 1300                    | 900  | 600   | -     | 3                | 3   |

### RATINGS & PART NUMBER REFERENCE

| AVX Part No.          | Case Size | Capacitance (µF) | Rated Voltage (V) | Maximum Operating Temperature (°C) | DCL Max. (µA) | DF Max. (%) | ESR Max. @ 100kHz (mΩ) | 100kHz RMS Current (mA) |      |       |       | Product Category | MSL |
|-----------------------|-----------|------------------|-------------------|------------------------------------|---------------|-------------|------------------------|-------------------------|------|-------|-------|------------------|-----|
|                       |           |                  |                   |                                    |               |             |                        | 45°C                    | 85°C | 105°C | 125°C |                  |     |
| <b>10 Volt @ 85°C</b> |           |                  |                   |                                    |               |             |                        |                         |      |       |       |                  |     |
| TCJK475M010#0300E     | K         | 4.7              | 10                | 105                                | 4.7           | 6           | 300                    | 500                     | 400  | 200   | –     | 3                | 3   |
| TCJK475M010#0500E     | K         | 4.7              | 10                | 105                                | 4.7           | 6           | 500                    | 400                     | 300  | 200   | –     | 3                | 3   |
| TCJR475M010#0500E     | R         | 4.7              | 10                | 105                                | 4.7           | 6           | 500                    | 400                     | 300  | 200   | –     | 3                | 3   |
| TCJA106M010#0200E     | A         | 10               | 10                | 125                                | 10            | 6           | 200                    | 700                     | 500  | 300   | 200   | 1                | 3   |
| TCJA106M010#0300E     | A         | 10               | 10                | 125                                | 10            | 6           | 300                    | 600                     | 400  | 300   | 200   | 1                | 3   |
| TCJA156M010#0200E     | A         | 15               | 10                | 125                                | 15            | 6           | 200                    | 700                     | 500  | 300   | 200   | 1                | 3   |
| TCJB226M010#0300E     | B         | 22               | 10                | 125                                | 22            | 6           | 300                    | 600                     | 400  | 300   | 200   | 1                | 3   |
| TCJT226M010#0070E     | T         | 22               | 10                | 105                                | 22            | 6           | 70                     | 1200                    | 800  | 500   | –     | 3                | 3   |
| TCJT226M010#0150E     | T         | 22               | 10                | 105                                | 22            | 6           | 150                    | 800                     | 600  | 400   | –     | 3                | 3   |
| TCJB336M010#0070E     | B         | 33               | 10                | 125                                | 33            | 6           | 70                     | 1300                    | 900  | 600   | 300   | 1                | 3   |
| TCJB336M010#0200E     | B         | 33               | 10                | 125                                | 33            | 6           | 200                    | 800                     | 600  | 400   | 200   | 1                | 3   |
| TCJC336M010#0100E     | C         | 33               | 10                | 125                                | 33            | 6           | 100                    | 1300                    | 900  | 600   | 300   | 1                | 3   |
| TCJT336M010#0070E     | T         | 33               | 10                | 105                                | 33            | 6           | 70                     | 1200                    | 800  | 500   | –     | 3                | 3   |
| TCJT336M010#0150E     | T         | 33               | 10                | 105                                | 33            | 6           | 150                    | 800                     | 600  | 400   | –     | 3                | 3   |
| TCJB476M010#0070E     | B         | 47               | 10                | 105                                | 47            | 6           | 70                     | 1300                    | 900  | 600   | –     | 3                | 3   |
| TCJC476M010#0100E     | C         | 47               | 10                | 125                                | 47            | 6           | 100                    | 1300                    | 900  | 600   | 300   | 1                | 3   |
| TCJH476M010#0100E     | H         | 47               | 10                | 105                                | 47            | 6           | 100                    | 1000                    | 700  | 500   | –     | 3                | 3   |
| TCJD686M010#0045E     | D         | 68               | 10                | 105                                | 68            | 6           | 45                     | 2200                    | 1500 | 1000  | –     | 3                | 3   |
| TCJD686M010#0055E     | D         | 68               | 10                | 105                                | 68            | 6           | 55                     | 2000                    | 1400 | 900   | –     | 3                | 3   |
| TCJY686M010#0045E     | Y         | 68               | 10                | 105                                | 68            | 6           | 45                     | 2000                    | 1400 | 900   | –     | 3                | 3   |
| TCJY686M010#0055E     | Y         | 68               | 10                | 105                                | 68            | 6           | 55                     | 1800                    | 1300 | 800   | –     | 3                | 3   |
| TCJD107M010#0018      | D         | 100              | 10                | 105                                | 100           | 6           | 18                     | 3500                    | 2500 | 1600  | –     | 2                | 3   |
| TCJD107M010#0025E     | D         | 100              | 10                | 105                                | 100           | 6           | 25                     | 3000                    | 2100 | 1400  | –     | 2                | 3   |
| TCJD107M010#0045E     | D         | 100              | 10                | 105                                | 100           | 6           | 45                     | 2200                    | 1500 | 1000  | –     | 3                | 3   |
| TCJD107M010#0055E     | D         | 100              | 10                | 105                                | 100           | 6           | 55                     | 2000                    | 1400 | 900   | –     | 3                | 3   |
| TCJD107M010#0080E     | D         | 100              | 10                | 105                                | 100           | 6           | 80                     | 1700                    | 1200 | 800   | –     | 3                | 3   |
| TCJY107M010#0018      | Y         | 100              | 10                | 105                                | 100           | 6           | 18                     | 3200                    | 2200 | 1400  | –     | 2                | 3   |
| TCJY107M010#0025E     | Y         | 100              | 10                | 105                                | 100           | 6           | 25                     | 2700                    | 1900 | 1200  | –     | 2                | 3   |
| TCJY107M010#0045E     | Y         | 100              | 10                | 105                                | 100           | 6           | 45                     | 2000                    | 1400 | 900   | –     | 3                | 3   |
| TCJY107M010#0055E     | Y         | 100              | 10                | 105                                | 100           | 6           | 55                     | 1800                    | 1300 | 800   | –     | 3                | 3   |
| TCJD157M010#0025E     | D         | 150              | 10                | 105                                | 150           | 6           | 25                     | 3000                    | 2100 | 1400  | –     | 3                | 3   |
| TCJD157M010#0040E     | D         | 150              | 10                | 105                                | 150           | 6           | 40                     | 2400                    | 1700 | 1100  | –     | 3                | 3   |
| TCJD157M010#0045E     | D         | 150              | 10                | 105                                | 150           | 6           | 45                     | 2200                    | 1500 | 1000  | –     | 3                | 3   |
| TCJD157M010#0055E     | D         | 150              | 10                | 105                                | 150           | 6           | 55                     | 2000                    | 1400 | 900   | –     | 3                | 3   |
| TCJY157M010#0025E     | Y         | 150              | 10                | 105                                | 150           | 6           | 25                     | 2700                    | 1900 | 1200  | –     | 3                | 3   |
| TCJY157M010#0040E     | Y         | 150              | 10                | 105                                | 150           | 6           | 40                     | 2200                    | 1500 | 1000  | –     | 3                | 3   |
| TCJY157M010#0045E     | Y         | 150              | 10                | 105                                | 150           | 6           | 45                     | 2000                    | 1400 | 900   | –     | 3                | 3   |
| TCJY157M010#0055E     | Y         | 150              | 10                | 105                                | 150           | 6           | 55                     | 1800                    | 1300 | 800   | –     | 3                | 3   |
| TCJD227M010#0015      | D         | 220              | 10                | 105                                | 220           | 6           | 15                     | 3900                    | 2700 | 1800  | –     | 3                | 3   |
| TCJD227M010#0025E     | D         | 220              | 10                | 105                                | 220           | 6           | 25                     | 3000                    | 2100 | 1400  | –     | 3                | 3   |
| TCJD227M010#0040E     | D         | 220              | 10                | 105                                | 220           | 6           | 40                     | 2400                    | 1700 | 1100  | –     | 3                | 3   |
| TCJD227M010#0050E     | D         | 220              | 10                | 105                                | 220           | 6           | 50                     | 2100                    | 1500 | 900   | –     | 3                | 3   |
| TCJY227M010#0015      | Y         | 220              | 10                | 85                                 | 220           | 6           | 15                     | 3500                    | 2500 | –     | –     | 5                | 3   |
| TCJY227M010#0025E     | Y         | 220              | 10                | 105                                | 220           | 6           | 25                     | 2700                    | 1900 | 1200  | –     | 3                | 3   |
| TCJY227M010#0040E     | Y         | 220              | 10                | 105                                | 220           | 6           | 40                     | 2200                    | 1500 | 1000  | –     | 3                | 3   |
| TCJY227M010#0050E     | Y         | 220              | 10                | 105                                | 220           | 6           | 50                     | 1900                    | 1300 | 900   | –     | 3                | 3   |
| TCJD337M010#0025E     | D         | 330              | 10                | 105                                | 330           | 6           | 25                     | 3000                    | 2100 | 1400  | –     | 2                | 3   |
| TCJ5337M010#0035E     | 5         | 330              | 10                | 105                                | 330           | 10          | 35                     | 2600                    | 1800 | 1200  | –     | 2                | 3   |
| TCJ5337M010#0100E     | 5         | 330              | 10                | 105                                | 330           | 10          | 100                    | 1500                    | 1100 | 700   | –     | 2                | 3   |
| <b>16 Volt @ 85°C</b> |           |                  |                   |                                    |               |             |                        |                         |      |       |       |                  |     |
| TCJA685M016#0200E     | A         | 6.8              | 16                | 125                                | 10.9          | 6           | 200                    | 700                     | 500  | 300   | 200   | 1                | 3   |
| TCJA106M016#0200E     | A         | 10               | 16                | 125                                | 16            | 6           | 200                    | 700                     | 500  | 300   | 200   | 1                | 3   |
| TCJB106M016#0100E     | B         | 10               | 16                | 125                                | 16            | 6           | 100                    | 1100                    | 800  | 500   | 300   | 1                | 3   |
| TCJB106M016#0200E     | B         | 10               | 16                | 125                                | 16            | 6           | 200                    | 800                     | 600  | 400   | 200   | 1                | 3   |
| TCJT106M016#0100E     | T         | 10               | 16                | 125                                | 16            | 6           | 100                    | 1000                    | 700  | 500   | 300   | 1                | 3   |
| TCJT106M016#0150E     | T         | 10               | 16                | 125                                | 16            | 6           | 150                    | 800                     | 600  | 400   | 200   | 1                | 3   |
| TCJT106M016#0200E     | T         | 10               | 16                | 125                                | 16            | 6           | 200                    | 700                     | 500  | 300   | 200   | 1                | 3   |
| TCJB156M016#0150E     | B         | 15               | 16                | 125                                | 24            | 6           | 150                    | 900                     | 600  | 400   | 200   | 1                | 3   |
| TCJA226M016#0300E     | A         | 22               | 16                | 105                                | 35.2          | 10          | 300                    | 600                     | 400  | 300   | –     | 3                | 3   |
| TCJB226M016#0150E     | B         | 22               | 16                | 125                                | 35.2          | 6           | 150                    | 900                     | 600  | 400   | 200   | 1                | 3   |
| TCJA336M016#0200E     | A         | 33               | 16                | 105                                | 52.8          | 10          | 200                    | 700                     | 500  | 300   | –     | 3                | 3   |
| TCJH336M016#0150E     | H         | 33               | 16                | 105                                | 52.8          | 6           | 150                    | 800                     | 600  | 400   | –     | 3                | 3   |
| TCJY336M016#0045E     | Y         | 33               | 16                | 105                                | 52.8          | 6           | 45                     | 2000                    | 1400 | 900   | –     | 2                | 3   |
| TCJY336M016#0060E     | Y         | 33               | 16                | 105                                | 52.8          | 6           | 60                     | 1800                    | 1300 | 800   | –     | 2                | 3   |
| TCJY336M016#0070E     | Y         | 33               | 16                | 105                                | 52.8          | 6           | 70                     | 1600                    | 1100 | 700   | –     | 2                | 3   |
| TCJX476M016#0045E     | X         | 47               | 16                | 105                                | 75.2          | 6           | 45                     | 2000                    | 1400 | 900   | –     | 2                | 3   |
| TCJX476M016#0070E     | X         | 47               | 16                | 105                                | 75.2          | 6           | 70                     | 1600                    | 1100 | 700   | –     | 2                | 3   |
| TCJY476M016#0045E     | Y         | 47               | 16                | 105                                | 75.2          | 6           | 45                     | 2000                    | 1400 | 900   | –     | 2                | 3   |
| TCJY476M016#0070E     | Y         | 47               | 16                | 105                                | 75.2          | 6           | 70                     | 1600                    | 1100 | 700   | –     | 2                | 3   |
| TCJD686M016#0050E     | D         | 68               | 16                | 105                                | 108.8         | 6           | 50                     | 2100                    | 1500 | 900   | –     | 2                | 3   |
| TCJY686M016#0050E     | Y         | 68               | 16                | 105                                | 108.8         | 6           | 50                     | 1900                    | 1300 | 900   | –     | 2                | 3   |
| TCJD107M016#0050E     | D         | 100              | 16                | 105                                | 160           | 6           | 50                     | 2100                    | 1500 | 900   | –     | 2                | 3   |
| TCJE107M016#0040E     | E         | 100              | 16                | 105                                | 160           | 6           | 40                     | 2500                    | 1800 | 1100  | –     | 2                | 3   |
| TCJY107M016#0050E     | Y         | 100              | 16                | 105                                | 160           | 6           | 50                     | 1900                    | 1300 | 900   | –     | 2                | 3   |
| TCJD157M016#0040E     | D         | 150              | 16                | 85                                 | 240           | 6           | 40                     | 2400                    | 1700 | –     | –     | 5                | 3   |
| TCJD157M016#0050E     | D         | 150              | 16                | 85                                 | 240           | 6           | 50                     | 2100                    | 1500 | –     | –     | 5                | 3   |
| TCJD157M016#0070E     | D         | 150              | 16                | 105                                | 240           | 6           | 70                     | 1800                    | 1300 | 800   | –     | 3                | 3   |
| TCJE157M016#0040E     | E         | 150              | 16                | 105                                | 240           | 6           | 40                     | 2500                    | 1800 | 1100  | –     | 2                | 3   |
| TCJY157M016#0040E     | Y         | 150              | 16                | 85                                 | 240           | 6           | 40                     | 2200                    | 1500 | –     | –     | 5                | 3   |
| TCJY157M016#0050E     | Y         | 150              | 16                | 85                                 | 240           | 6           | 50                     | 1900                    | 1300 | –     | –     | 5                | 3   |
| TCJY157M016#0070E     | Y         | 150              | 16                | 105                                | 240           | 6           | 70                     | 1600                    | 1100 | 700   | –     | 3                | 3   |

### RATINGS & PART NUMBER REFERENCE

| AVX Part No.          | Case Size | Capacitance (µF) | Rated Voltage (V) | Maximum Operating Temperature (°C) | DCL Max. (µA) | DF Max. (%) | ESR Max. @ 100kHz (mΩ) | 100kHz RMS Current (mA) |      |       |       | Product Category | MSL |
|-----------------------|-----------|------------------|-------------------|------------------------------------|---------------|-------------|------------------------|-------------------------|------|-------|-------|------------------|-----|
|                       |           |                  |                   |                                    |               |             |                        | 45°C                    | 85°C | 105°C | 125°C |                  |     |
| TCJD227M016#0050E     | D         | 220              | 16                | 105                                | 352           | 10          | 50                     | 2100                    | 1500 | 900   | –     | 2                | 3   |
| TCJE337M016#0050E     | E         | 330              | 16                | 105                                | 528           | 10          | 50                     | 2200                    | 1500 | 1000  | –     | 2                | 3   |
| TCJE337M016#0070E     | E         | 330              | 16                | 105                                | 528           | 10          | 70                     | 1900                    | 1300 | 900   | –     | 2                | 3   |
| TCJ5337M016#0100E     | 5         | 330              | 16                | 105                                | 528           | 10          | 100                    | 1500                    | 1100 | 700   | –     | 2                | 3   |
| TCJ5477M016R0100E     | 5         | 470              | 16                | 105                                | 752           | 10          | 100                    | 1500                    | 1100 | 700   | –     | 3                | 3   |
| <b>20 Volt @ 85°C</b> |           |                  |                   |                                    |               |             |                        |                         |      |       |       |                  |     |
| TCJA106M020#0150E     | A         | 10               | 20                | 105                                | 20            | 6           | 150                    | 800                     | 600  | 400   | –     | 3                | 3   |
| TCJB226M020#0090E     | B         | 22               | 20                | 105                                | 44            | 6           | 90                     | 1200                    | 800  | 500   | –     | 3                | 3   |
| TCJB226M020#0150E     | B         | 22               | 20                | 105                                | 44            | 6           | 150                    | 900                     | 600  | 400   | –     | 3                | 3   |
| TCJY226M020#0070E     | Y         | 22               | 20                | 105                                | 44            | 6           | 70                     | 1600                    | 1100 | 700   | –     | 2                | 3   |
| TCJY336M020#0070E     | Y         | 33               | 20                | 105                                | 66            | 6           | 70                     | 1600                    | 1100 | 700   | –     | 2                | 3   |
| TCJD476M020#0055E     | D         | 47               | 20                | 105                                | 94            | 6           | 55                     | 2000                    | 1400 | 900   | –     | 2                | 3   |
| TCJX476M020#0055E     | X         | 47               | 20                | 105                                | 94            | 6           | 55                     | 1800                    | 1300 | 800   | –     | 3                | 3   |
| TCJX476M020#0070E     | X         | 47               | 20                | 105                                | 94            | 6           | 70                     | 1600                    | 1100 | 700   | –     | 3                | 3   |
| TCJY476M020#0070E     | Y         | 47               | 20                | 105                                | 94            | 6           | 70                     | 1600                    | 1100 | 700   | –     | 2                | 3   |
| TCJD686M020#0055E     | D         | 68               | 20                | 105                                | 136           | 6           | 55                     | 2000                    | 1400 | 900   | –     | 3                | 3   |
| TCJE686M020#0045E     | E         | 68               | 20                | 105                                | 136           | 6           | 45                     | 2400                    | 1700 | 1100  | –     | 2                | 3   |
| TCJY686M020#0050E     | Y         | 68               | 20                | 105                                | 136           | 6           | 50                     | 1900                    | 1300 | 900   | –     | 2                | 3   |
| TCJD107M020#0055E     | D         | 100              | 20                | 105                                | 200           | 6           | 55                     | 2000                    | 1400 | 900   | –     | 2                | 3   |
| TCJE107M020#0045E     | E         | 100              | 20                | 105                                | 200           | 6           | 45                     | 2400                    | 1700 | 1100  | –     | 3                | 3   |
| TCJY107M020#0055E     | Y         | 100              | 20                | 105                                | 200           | 6           | 55                     | 1800                    | 1300 | 800   | –     | 2                | 3   |
| TCJU227M020R0070E     | U         | 220              | 20                | 105                                | 440           | 12          | 70                     | 2300                    | 1600 | 1000  | –     | 2                | 3   |
| <b>25 Volt @ 85°C</b> |           |                  |                   |                                    |               |             |                        |                         |      |       |       |                  |     |
| TCJP105M025#0500E     | P         | 1.0              | 25                | 105                                | 2.5           | 6           | 500                    | 400                     | 300  | 200   | –     | 2                | 3   |
| TCJB475M025#0100E     | B         | 4.7              | 25                | 105                                | 11.8          | 6           | 100                    | 1100                    | 800  | 500   | –     | 3                | 3   |
| TCJB475M025#0150E     | B         | 4.7              | 25                | 105                                | 11.8          | 6           | 150                    | 900                     | 600  | 400   | –     | 3                | 3   |
| TCJA685M025#0150E     | A         | 6.8              | 25                | 105                                | 17            | 6           | 150                    | 800                     | 600  | 400   | –     | 3                | 3   |
| TCJB685M025#0090E     | B         | 6.8              | 25                | 105                                | 17            | 6           | 90                     | 1200                    | 800  | 500   | –     | 2                | 3   |
| TCJB685M025#0150E     | B         | 6.8              | 25                | 105                                | 17            | 6           | 150                    | 900                     | 600  | 400   | –     | 3                | 3   |
| TCJT685M025#0100E     | T         | 6.8              | 25                | 105                                | 17            | 6           | 100                    | 1000                    | 700  | 500   | –     | 3                | 3   |
| TCJT685M025#0150E     | T         | 6.8              | 25                | 105                                | 17            | 6           | 150                    | 800                     | 600  | 400   | –     | 3                | 3   |
| TCJA106M025#0150E     | A         | 10               | 25                | 105                                | 25            | 6           | 150                    | 800                     | 600  | 400   | –     | 3                | 3   |
| TCJB106M025#0090E     | B         | 10               | 25                | 105                                | 25            | 6           | 90                     | 1200                    | 800  | 500   | –     | 2                | 3   |
| TCJB106M025#0100E     | B         | 10               | 25                | 105                                | 25            | 6           | 100                    | 1100                    | 800  | 500   | –     | 2                | 3   |
| TCJB106M025#0150E     | B         | 10               | 25                | 105                                | 25            | 6           | 150                    | 900                     | 600  | 400   | –     | 2                | 3   |
| TCJB156M025#0100E     | B         | 15               | 25                | 105                                | 37.5          | 6           | 100                    | 1100                    | 800  | 500   | –     | 2                | 3   |
| TCJB156M025#0150E     | B         | 15               | 25                | 105                                | 37.5          | 6           | 150                    | 900                     | 600  | 400   | –     | 2                | 3   |
| TCJY156M025#0090E     | Y         | 15               | 25                | 105                                | 37.5          | 6           | 90                     | 1400                    | 1000 | 600   | –     | 2                | 3   |
| TCJB226M025#0100E     | B         | 22               | 25                | 105                                | 55            | 6           | 100                    | 1100                    | 800  | 500   | –     | 2                | 3   |
| TCJB226M025#0150E     | B         | 22               | 25                | 105                                | 55            | 6           | 150                    | 900                     | 600  | 400   | –     | 2                | 3   |
| TCJC226M025#0100E     | C         | 22               | 25                | 105                                | 55            | 6           | 100                    | 1300                    | 900  | 600   | –     | 3                | 3   |
| TCJD226M025#0060E     | D         | 22               | 25                | 105                                | 55            | 6           | 60                     | 1900                    | 1300 | 900   | –     | 2                | 3   |
| TCJD226M025#0100E     | D         | 22               | 25                | 105                                | 55            | 6           | 100                    | 1500                    | 1100 | 700   | –     | 2                | 3   |
| TCJY226M025#0070E     | Y         | 22               | 25                | 105                                | 55            | 6           | 70                     | 1600                    | 1100 | 700   | –     | 3                | 3   |
| TCJD336M025#0060E     | D         | 33               | 25                | 105                                | 82.5          | 6           | 60                     | 1900                    | 1300 | 900   | –     | 2                | 3   |
| TCJD336M025#0100E     | D         | 33               | 25                | 105                                | 82.5          | 6           | 100                    | 1500                    | 1100 | 700   | –     | 2                | 3   |
| TCJX336M025#0070E     | X         | 33               | 25                | 105                                | 82.5          | 6           | 70                     | 1600                    | 1100 | 700   | –     | 2                | 3   |
| TCJX336M025#0100E     | X         | 33               | 25                | 105                                | 82.5          | 6           | 100                    | 1300                    | 900  | 600   | –     | 2                | 3   |
| TCJY336M025#0060E     | Y         | 33               | 25                | 105                                | 82.5          | 6           | 60                     | 1800                    | 1300 | 800   | –     | 2                | 3   |
| TCJY336M025#0070E     | Y         | 33               | 25                | 105                                | 82.5          | 6           | 70                     | 1600                    | 1100 | 700   | –     | 2                | 3   |
| TCJY336M025#0100E     | Y         | 33               | 25                | 105                                | 82.5          | 6           | 100                    | 1400                    | 1000 | 600   | –     | 2                | 3   |
| TCJD476M025#0060E     | D         | 47               | 25                | 105                                | 117.5         | 6           | 60                     | 1900                    | 1300 | 900   | –     | 3                | 3   |
| TCJD476M025#0100E     | D         | 47               | 25                | 105                                | 117.5         | 6           | 100                    | 1500                    | 1100 | 700   | –     | 3                | 3   |
| TCJE476M025#0050E     | E         | 47               | 25                | 105                                | 117.5         | 6           | 50                     | 2200                    | 1500 | 1000  | –     | 3                | 3   |
| TCJY476M025#0100E     | Y         | 47               | 25                | 105                                | 117.5         | 6           | 100                    | 1400                    | 1000 | 600   | –     | 3                | 3   |
| TCJD686M025#0070E     | D         | 68               | 25                | 105                                | 170           | 6           | 70                     | 1800                    | 1300 | 800   | –     | 2                | 3   |
| TCJE686M025#0050E     | E         | 68               | 25                | 105                                | 170           | 6           | 50                     | 2200                    | 1500 | 1000  | –     | 3                | 3   |
| TCJY686M025#0100E     | Y         | 68               | 25                | 105                                | 170           | 6           | 100                    | 1400                    | 1000 | 600   | –     | 3                | 3   |
| TCJD107M025#0055E     | D         | 100              | 25                | 105                                | 250           | 6           | 55                     | 2000                    | 1400 | 900   | –     | 2                | 3   |
| TCJD107M025#0070E     | D         | 100              | 25                | 105                                | 250           | 6           | 70                     | 1800                    | 1300 | 800   | –     | 2                | 3   |
| TCJE107M025#0080E     | E         | 100              | 25                | 105                                | 250           | 6           | 80                     | 1800                    | 1300 | 800   | –     | 2                | 3   |
| TCJU107M025R0070E     | U         | 100              | 25                | 125                                | 250           | 12          | 70                     | 2300                    | 1600 | 1000  | 600   | 1                | 3   |
| TCJU157M025R0070E     | U         | 150              | 25                | 105                                | 375           | 12          | 70                     | 2300                    | 1600 | 1000  | –     | 2                | 3   |
| <b>35 Volt @ 85°C</b> |           |                  |                   |                                    |               |             |                        |                         |      |       |       |                  |     |
| TCJB155M035#0200E     | B         | 1.5              | 35                | 105                                | 5.3           | 6           | 200                    | 800                     | 600  | 400   | –     | 2                | 3   |
| TCJB225M035#0200E     | B         | 2.2              | 35                | 105                                | 7.7           | 6           | 200                    | 800                     | 600  | 400   | –     | 3                | 3   |
| TCJB335M035#0200E     | B         | 3.3              | 35                | 105                                | 11.6          | 6           | 200                    | 800                     | 600  | 400   | –     | 3                | 3   |
| TCJB475M035#0200E     | B         | 4.7              | 35                | 105                                | 16.5          | 6           | 200                    | 800                     | 600  | 400   | –     | 3                | 3   |
| TCJC475M035#0200E     | C         | 4.7              | 35                | 105                                | 16.5          | 6           | 200                    | 900                     | 600  | 400   | –     | 3                | 3   |
| TCJC685M035#0200E     | C         | 6.8              | 35                | 105                                | 23.8          | 6           | 200                    | 900                     | 600  | 400   | –     | 3                | 3   |
| TCJB106M035#0200E     | B         | 10               | 35                | 105                                | 35            | 6           | 200                    | 800                     | 600  | 400   | –     | 2                | 3   |
| TCJC106M035#0200E     | C         | 10               | 35                | 105                                | 35            | 6           | 200                    | 900                     | 600  | 400   | –     | 3                | 3   |
| TCJY106M035#0070E     | Y         | 10               | 35                | 105                                | 35            | 6           | 70                     | 1600                    | 1100 | 700   | –     | 2                | 3   |
| TCJB156M035#0200E     | B         | 15               | 35                | 105                                | 52.5          | 6           | 200                    | 800                     | 600  | 400   | –     | 2                | 3   |
| TCJC156M035#0200E     | C         | 15               | 35                | 105                                | 52.5          | 6           | 200                    | 900                     | 600  | 400   | –     | 3                | 3   |
| TCJD156M035#0070E     | D         | 15               | 35                | 105                                | 52.5          | 6           | 70                     | 1800                    | 1300 | 800   | –     | 3                | 3   |
| TCJD156M035#0100E     | D         | 15               | 35                | 105                                | 52.5          | 6           | 100                    | 1500                    | 1100 | 700   | –     | 3                | 3   |
| TCJY156M035#0070E     | Y         | 15               | 35                | 105                                | 52.5          | 6           | 70                     | 1600                    | 1100 | 700   | –     | 3                | 3   |
| TCJY156M035#0100E     | Y         | 15               | 35                | 105                                | 52.5          | 6           | 100                    | 1400                    | 1000 | 600   | –     | 3                | 3   |
| TCJD226M035#0070E     | D         | 22               | 35                | 105                                | 77            | 6           | 70                     | 1800                    | 1300 | 800   | –     | 2                | 3   |

### RATINGS & PART NUMBER REFERENCE

| AVX Part No.           | Case Size | Capacitance (µF) | Rated Voltage (V) | Maximum Operating Temperature (°C) | DCL Max. (µA) | DF Max. (%) | ESR Max. @ 100kHz (mΩ) | 100kHz RMS Current (mA) |      |       |       | Product Category | MSL |
|------------------------|-----------|------------------|-------------------|------------------------------------|---------------|-------------|------------------------|-------------------------|------|-------|-------|------------------|-----|
|                        |           |                  |                   |                                    |               |             |                        | 45°C                    | 85°C | 105°C | 125°C |                  |     |
| TCJD226M035#0100E      | D         | 22               | 35                | 105                                | 77            | 6           | 100                    | 1500                    | 1100 | 700   | —     | 2                | 3   |
| TCJY226M035#0150E      | Y         | 22               | 35                | 105                                | 77            | 6           | 150                    | 1100                    | 800  | 500   | —     | 3                | 3   |
| TCJD336M035#0070E      | D         | 33               | 35                | 105                                | 115.5         | 6           | 70                     | 1800                    | 1300 | 800   | —     | 2                | 3   |
| TCJD336M035#0100E      | D         | 33               | 35                | 105                                | 115.5         | 6           | 100                    | 1500                    | 1100 | 700   | —     | 2                | 3   |
| TCJE336M035#0055E      | E         | 33               | 35                | 105                                | 115.5         | 6           | 55                     | 2100                    | 1500 | 900   | —     | 3                | 3   |
| TCJE336M035#0070E      | E         | 33               | 35                | 105                                | 115.5         | 6           | 70                     | 1900                    | 1300 | 900   | —     | 3                | 3   |
| TCJU336M035R0070E      | U         | 33               | 35                | 125                                | 115.5         | 12          | 70                     | 2300                    | 1600 | 1000  | 600   | 1                | 3   |
| TCJY336M035#0100E      | Y         | 33               | 35                | 105                                | 115.5         | 6           | 100                    | 1400                    | 1000 | 600   | —     | 3                | 3   |
| TCJE476M035#0055E      | E         | 47               | 35                | 105                                | 164.5         | 6           | 55                     | 2100                    | 1500 | 900   | —     | 2                | 3   |
| TCJU476M035R0070E      | U         | 47               | 35                | 125                                | 164.5         | 12          | 70                     | 2300                    | 1600 | 1000  | 600   | 1                | 3   |
| TCJY476M035#0100E      | Y         | 47               | 35                | 105                                | 164.5         | 6           | 100                    | 1400                    | 1000 | 600   | —     | 3                | 3   |
| <b>50 Volt @ 85°C</b>  |           |                  |                   |                                    |               |             |                        |                         |      |       |       |                  |     |
| TCJB684M050#0400E      | B         | 0.68             | 50                | 105                                | 3.4           | 6           | 400                    | 600                     | 400  | 300   | —     | 3                | 3   |
| TCJB105M050#0300E      | B         | 1.0              | 50                | 105                                | 5             | 6           | 300                    | 600                     | 400  | 300   | —     | 3                | 3   |
| TCJB155M050#0300E      | B         | 1.5              | 50                | 105                                | 7.5           | 6           | 300                    | 600                     | 400  | 300   | —     | 3                | 3   |
| TCJC155M050#0300E      | C         | 1.5              | 50                | 105                                | 7.5           | 6           | 300                    | 800                     | 600  | 400   | —     | 3                | 3   |
| TCJC225M050#0300E      | C         | 2.2              | 50                | 105                                | 11            | 6           | 300                    | 800                     | 600  | 400   | —     | 3                | 3   |
| TCJC335M050#0200E      | C         | 3.3              | 50                | 105                                | 16.5          | 8           | 200                    | 900                     | 600  | 400   | —     | 3                | 3   |
| TCJC475M050#0200E      | C         | 4.7              | 50                | 105                                | 23.5          | 8           | 200                    | 900                     | 600  | 400   | —     | 3                | 3   |
| TCJX475M050#0250E      | X         | 4.7              | 50                | 105                                | 23.5          | 6           | 250                    | 800                     | 600  | 400   | —     | 2                | 5   |
| TCJY475M050#0250E      | Y         | 4.7              | 50                | 105                                | 23.5          | 6           | 250                    | 900                     | 600  | 400   | —     | 2                | 5   |
| TCJC685M050#0200E      | C         | 6.8              | 50                | 105                                | 34            | 8           | 200                    | 900                     | 600  | 400   | —     | 3                | 3   |
| TCJD685M050#0120E      | D         | 6.8              | 50                | 105                                | 34            | 10          | 120                    | 1400                    | 1000 | 600   | —     | 3                | 3   |
| TCJD106M050#0090E      | D         | 10               | 50                | 105                                | 50            | 10          | 90                     | 1600                    | 1100 | 700   | —     | 3                | 3   |
| TCJD106M050#0120E      | D         | 10               | 50                | 105                                | 50            | 10          | 120                    | 1400                    | 1000 | 600   | —     | 3                | 3   |
| TCJE106M050#0070E      | E         | 10               | 50                | 105                                | 50            | 6           | 70                     | 1900                    | 1300 | 900   | —     | 3                | 3   |
| TCJE106M050#0100E      | E         | 10               | 50                | 105                                | 50            | 6           | 100                    | 1600                    | 1100 | 700   | —     | 3                | 3   |
| TCJE156M050#0070E      | E         | 15               | 50                | 105                                | 75            | 6           | 70                     | 1900                    | 1300 | 900   | —     | 3                | 3   |
| TCJE156M050#0100E      | E         | 15               | 50                | 105                                | 75            | 6           | 100                    | 1600                    | 1100 | 700   | —     | 3                | 3   |
| <b>63 Volt @ 85°C</b>  |           |                  |                   |                                    |               |             |                        |                         |      |       |       |                  |     |
| TCJB474M063#0400E      | B         | 0.47             | 63                | 105                                | 3             | 8           | 400                    | 600                     | 400  | 300   | —     | 3                | 3   |
| TCJB684M063#0300E      | B         | 0.68             | 63                | 105                                | 4.3           | 8           | 300                    | 600                     | 400  | 300   | —     | 3                | 3   |
| TCJB105M063#0300E      | B         | 1.0              | 63                | 105                                | 6.3           | 8           | 300                    | 600                     | 400  | 300   | —     | 3                | 3   |
| TCJC105M063#0300E      | C         | 1.0              | 63                | 105                                | 6.3           | 6           | 300                    | 800                     | 600  | 400   | —     | 3                | 3   |
| TCJC155M063#0300E      | C         | 1.5              | 63                | 105                                | 9.5           | 6           | 300                    | 800                     | 600  | 400   | —     | 3                | 3   |
| TCJC225M063#0200E      | C         | 2.2              | 63                | 105                                | 13.9          | 6           | 200                    | 900                     | 600  | 400   | —     | 3                | 3   |
| TCJC335M063#0200E      | C         | 3.3              | 63                | 105                                | 20.8          | 6           | 200                    | 900                     | 600  | 400   | —     | 3                | 3   |
| TCJC475M063#0200E      | C         | 4.7              | 63                | 105                                | 29.6          | 6           | 200                    | 900                     | 600  | 400   | —     | 3                | 3   |
| TCJD475M063#0120E      | D         | 4.7              | 63                | 105                                | 29.6          | 6           | 120                    | 1400                    | 1000 | 600   | —     | 3                | 3   |
| TCJD685M063#0120E      | D         | 6.8              | 63                | 105                                | 42.8          | 6           | 120                    | 1400                    | 1000 | 600   | —     | 3                | 3   |
| TCJE685M063#0100E      | E         | 6.8              | 63                | 105                                | 42.8          | 6           | 100                    | 1600                    | 1100 | 700   | —     | 3                | 3   |
| TCJE685M063#0150E      | E         | 6.8              | 63                | 105                                | 42.8          | 6           | 150                    | 1300                    | 900  | 600   | —     | 3                | 3   |
| TCJE106M063#0100E      | E         | 10               | 63                | 105                                | 63            | 6           | 100                    | 1600                    | 1100 | 700   | —     | 3                | 3   |
| TCJE106M063#0150E      | E         | 10               | 63                | 105                                | 63            | 6           | 150                    | 1300                    | 900  | 600   | —     | 3                | 3   |
| <b>75 Volt @ 85°C</b>  |           |                  |                   |                                    |               |             |                        |                         |      |       |       |                  |     |
| TCJD475M075#0150E      | D         | 4.7              | 75                | 105                                | 35.3          | 6           | 150                    | 1200                    | 800  | 500   | —     | 3                | 3   |
| TCJD685M075#0120E      | D         | 6.8              | 75                | 105                                | 51            | 6           | 120                    | 1400                    | 1000 | 600   | —     | 3                | 3   |
| <b>100 Volt @ 85°C</b> |           |                  |                   |                                    |               |             |                        |                         |      |       |       |                  |     |
| TCJD475M100#0250E      | D         | 4.7              | 100               | 105                                | 47            | 8           | 250                    | 900                     | 600  | 400   | —     | 4                | 3   |
| <b>125 Volt @ 85°C</b> |           |                  |                   |                                    |               |             |                        |                         |      |       |       |                  |     |
| TCJD335M125#0250E      | D         | 3.3              | 125               | 105                                | 41.2          | 8           | 250                    | 900                     | 600  | 400   | —     | 4                | 3   |

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.

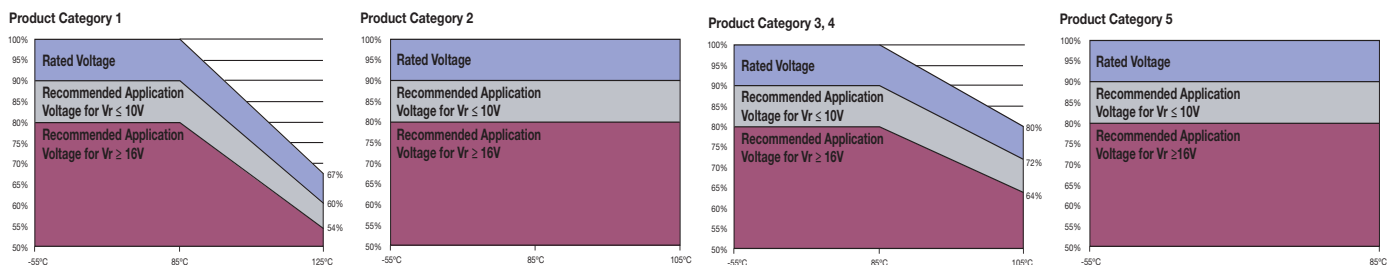
ESR allowed to move up to 1.25 times catalog limit post mounting.

For typical weight and composition see page 274.

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

### RECOMMENDED DERATING FACTOR

Voltage and temperature derating as percentage of Vr



### PRODUCT CATEGORY 1 (TEMPERATURE RANGE -55°C TO +125°C)

| TEST                         | Condition  | Characteristics    |                                   |              |     |           |           |           |            |           |
|------------------------------|--|--------------------|-----------------------------------|--------------|-----|-----------|-----------|-----------|------------|-----------|
| <b>Endurance</b>             | Apply rated voltage (Ur) at 85°C and / or 2/3 rated voltage (Ur) at 125°C for 2000 hours through a circuit impedance of $\leq 0.1\Omega/V$ . Stabilize at room temperature for 1-2 hours before measuring. | Visual examination | no visible damage                 |              |     |           |           |           |            |           |
|                              |  | DCL                | 1.25 x initial limit              |              |     |           |           |           |            |           |
|                              |  | $\Delta C/C$       | within +10/-20% of initial value  |              |     |           |           |           |            |           |
|                              |  | DF                 | 1.5 x initial limit               |              |     |           |           |           |            |           |
|                              |  | ESR                | 2 x initial limit                 |              |     |           |           |           |            |           |
| <b>Storage Life</b>          | Store at 125°C, no voltage applied, for 2000 hours. Stabilize at room temperature for 1-2 hours before measuring.  | Visual examination | no visible damage                 |              |     |           |           |           |            |           |
|                              |  | DCL                | 2 x initial limit                 |              |     |           |           |           |            |           |
|                              |  | $\Delta C/C$       | within +10/-20% of initial value  |              |     |           |           |           |            |           |
|                              |  | DF                 | 1.5 x initial limit               |              |     |           |           |           |            |           |
|                              |  | ESR                | 2 x initial limit                 |              |     |           |           |           |            |           |
| <b>Humidity</b>              | Store at 65°C and 95% relative humidity for 500 hours, with no applied voltage. Stabilize at room temperature and humidity for 1-2 hours before measuring.   | Visual examination | no visible damage                 |              |     |           |           |           |            |           |
|                              |  | DCL                | 3 x initial limit                 |              |     |           |           |           |            |           |
|                              |  | $\Delta C/C$       | within +35/-5% of initial value   |              |     |           |           |           |            |           |
|                              |  | DF                 | 1.5 x initial limit               |              |     |           |           |           |            |           |
|                              |  | ESR                | 2 x initial limit                 |              |     |           |           |           |            |           |
| <b>Temperature Stability</b> | Step   | Temperature°C      | Duration(min)                     |              |     |           |           |           |            |           |
|                              | 1  | +20                | 15                                |              |     |           |           |           |            |           |
|                              | 2  | -55                | 15                                |              |     |           |           |           |            |           |
|                              | 3  | +20                | 15                                |              |     |           |           |           |            |           |
|                              | 4  | +85                | 15                                |              |     |           |           |           |            |           |
|                              | 5  | +125               | 15                                |              |     |           |           |           |            |           |
|                              | 6  | +20                | 15                                |              |     |           |           |           |            |           |
|                              |  |                    |                                   | DCL          | IL* | n/a       | IL*       | 10 x IL*  | 12.5 x IL* | IL*       |
|                              |  |                    |                                   | $\Delta C/C$ | n/a | +0/-20%   | $\pm 5\%$ | +20/-0%   | +30/-0%    | $\pm 5\%$ |
|                              |  |                    |                                   | DF           | IL* | 1.5 x IL* | IL*       | 1.5 x IL* | 2 x IL*    | IL*       |
| <b>Surge Voltage</b>         | Apply 1.3x 2/3x rated voltage (Ur) at 125°C for 1000 cycles of duration 6 min (30 sec charge, 5 min 30 sec discharge) through a charge / discharge resistance of 1000 $\Omega$                             | Visual examination | no visible damage                 |              |     |           |           |           |            |           |
|                              |  | DCL                | initial limit                     |              |     |           |           |           |            |           |
|                              |  | $\Delta C/C$       | within +10/-20% of initial value  |              |     |           |           |           |            |           |
|                              |  | DF                 | 1.25 x initial limit              |              |     |           |           |           |            |           |
|                              |  | ESR                | initial limit                     |              |     |           |           |           |            |           |
| <b>Mechanical Shock</b>      | MIL-STD-202, Method 213, Condition C   | Visual examination | no visible damage                 |              |     |           |           |           |            |           |
|                              |  | DCL                | initial limit                     |              |     |           |           |           |            |           |
|                              |  | $\Delta C/C$       | within $\pm 5\%$ of initial value |              |     |           |           |           |            |           |
|                              |  | DF                 | initial limit                     |              |     |           |           |           |            |           |
|                              |  | ESR                | initial limit                     |              |     |           |           |           |            |           |
| <b>Vibration</b>             | MIL-STD-202, Method 204, Condition D   | Visual examination | no visible damage                 |              |     |           |           |           |            |           |
|                              |  | DCL                | initial limit                     |              |     |           |           |           |            |           |
|                              |  | $\Delta C/C$       | within $\pm 5\%$ of initial value |              |     |           |           |           |            |           |
|                              |  | DF                 | initial limit                     |              |     |           |           |           |            |           |
|                              |  | ESR                | initial limit                     |              |     |           |           |           |            |           |

\*Initial Limit

Initial measurement max. 1hr after the removal from dry pack or after pretreatment at 85°C for 24 hours.

### PRODUCT CATEGORY 2, 3, 4 (TEMPERATURE RANGE -55°C TO +105°C)

| TEST                         | Condition   | Characteristics        |                                   |               |              |               |           |           |            |         |           |
|------------------------------|---|------------------------|-----------------------------------|---------------|--------------|---------------|-----------|-----------|------------|---------|-----------|
| <b>Endurance</b>             | Apply rated voltage (Ur) at 85°C for 2000 hours through a circuit impedance of $\leq 0.1\Omega/V$ (all CATEGORIES). And / or apply rated voltage (Ur) (CATEGORY 2) or 0.8x rated voltage (CATEGORY 3, 4) at 105°C for 2000 hours through a circuit impedance of $\leq 0.1\Omega/V$ Always stabilize at room temperature for 1-2 hours before measuring. | Visual examination     | no visible damage                 |               |              |               |           |           |            |         |           |
|                              |   | DCL                    | 1.25 x initial limit              |               |              |               |           |           |            |         |           |
|                              |   | $\Delta C/C$           | within +10/-20% of initial value  |               |              |               |           |           |            |         |           |
|                              |   | DF                     | 1.5 x initial limit               |               |              |               |           |           |            |         |           |
|                              |   | ESR                    | 2 x initial limit                 |               |              |               |           |           |            |         |           |
| <b>Storage Life</b>          | Store at 105°C, no voltage applied, for 2000 hours. Stabilize at room temperature for 1-2 hours before measuring.   | Visual examination     | no visible damage                 |               |              |               |           |           |            |         |           |
|                              |   | DCL ( $V_R \leq 75V$ ) | 1.25 x initial limit              |               |              |               |           |           |            |         |           |
|                              |   | DCL ( $V_R > 75V$ )    | 2 x initial limit                 |               |              |               |           |           |            |         |           |
|                              |   | $\Delta C/C$           | within +10/-20% of initial value  |               |              |               |           |           |            |         |           |
|                              |   | DF                     | 1.5 x initial limit               |               |              |               |           |           |            |         |           |
|                              |   | ESR                    | 2 x initial limit                 |               |              |               |           |           |            |         |           |
| <b>Humidity</b>              | Store at 65°C and 95% relative humidity for 500 hours, with no applied voltage. Stabilize at room temperature and humidity for 1-2 hours before measuring.  | Visual examination     | no visible damage                 |               |              |               |           |           |            |         |           |
|                              |   | DCL                    | 3 x initial limit                 |               |              |               |           |           |            |         |           |
|                              |   | $\Delta C/C$           | within +35/-5% of initial value   |               |              |               |           |           |            |         |           |
|                              |   | DF                     | 1.5 x initial limit               |               |              |               |           |           |            |         |           |
|                              |   | ESR                    | 2 x initial limit                 |               |              |               |           |           |            |         |           |
| <b>Temperature Stability</b> | Step  | Temperature°C          | Duration(min)                     |               | +20°C        | -55°C         | +20°C     | +85°C     | +105°C     | +20°C   |           |
|                              | 1   | +20                    | 15                                | DCL           | IL*          | n/a           | IL*       | 10 x IL*  | 12.5 x IL* | IL*     |           |
|                              | 2   | -55                    | 15                                |               | $\Delta C/C$ | n/a           | +0/-20%   | $\pm 5\%$ | +20/-0%    | +30/-0% | $\pm 5\%$ |
|                              | 3   | +20                    | 15                                | DF            |              | IL*           | 1.5 x IL* | IL*       | 1.5 x IL*  | 2 x IL* | IL*       |
|                              | 4   | +85                    | 15                                |               | ESR          | initial limit |           |           |            |         |           |
|                              | 5   | +105                   | 15                                |               |              | initial limit |           |           |            |         |           |
|                              | 6   | +20                    | 15                                | initial limit |              |               |           |           |            |         |           |
|                              |   |                        |                                   | initial limit |              |               |           |           |            |         |           |
| <b>Surge Voltage</b>         | Apply 1.3x rated voltage (Ur) at 105°C for CATEGORY 2, or apply 1.3x 0.8x rated voltage (Ur) at 105°C for CATEGORY 3, 4 for 1000 cycles of duration 6 min (30 sec charge, 5 min 30 sec discharge) through a charge / discharge resistance of 1000 $\Omega$  | Visual examination     | no visible damage                 |               |              |               |           |           |            |         |           |
|                              |   | DCL                    | initial limit                     |               |              |               |           |           |            |         |           |
|                              |   | $\Delta C/C$           | within +10/-20% of initial value  |               |              |               |           |           |            |         |           |
|                              |   | DF                     | 1.25 x initial limit              |               |              |               |           |           |            |         |           |
| <b>Mechanical Shock</b>      | MIL-STD-202, Method 213, Condition C  | Visual examination     | no visible damage                 |               |              |               |           |           |            |         |           |
|                              |   | DCL                    | initial limit                     |               |              |               |           |           |            |         |           |
|                              |   | $\Delta C/C$           | within $\pm 5\%$ of initial value |               |              |               |           |           |            |         |           |
|                              |   | DF                     | initial limit                     |               |              |               |           |           |            |         |           |
|                              |   | ESR                    | initial limit                     |               |              |               |           |           |            |         |           |
| <b>Vibration</b>             | MIL-STD-202, Method 204, Condition D  | Visual examination     | no visible damage                 |               |              |               |           |           |            |         |           |
|                              |   | DCL                    | initial limit                     |               |              |               |           |           |            |         |           |
|                              |   | $\Delta C/C$           | within $\pm 5\%$ of initial value |               |              |               |           |           |            |         |           |
|                              |   | DF                     | initial limit                     |               |              |               |           |           |            |         |           |
|                              |   | ESR                    | initial limit                     |               |              |               |           |           |            |         |           |

\*Initial Limit

Initial measurement max. 1hr after the removal from dry pack or after pretreatment at 85°C for 24 hours.

# TCJ Series



## Conductive Polymer Solid Electrolytic Chip Capacitors

### PRODUCT CATEGORY 5 (TEMPERATURE RANGE -55°C TO +85°C)

| TEST                         | Condition  |               |               | Characteristics    |                                   |           |           |           |           |
|------------------------------|--|---------------|---------------|--------------------|-----------------------------------|-----------|-----------|-----------|-----------|
| <b>Endurance</b>             | Apply rated voltage (Ur) at 85°C for 2000 hours through a circuit impedance of $\leq 0.1\Omega/V$ . Stabilize at room temperature for 1-2 hours before measuring.        |               |               | Visual examination | no visible damage                 |           |           |           |           |
|                              |  |               |               | DCL                | 1.25 x initial limit              |           |           |           |           |
|                              |  |               |               | $\Delta C/C$       | within +10/-20% of initial value  |           |           |           |           |
|                              |  |               |               | DF                 | 1.5 x initial limit               |           |           |           |           |
|                              |  |               |               | ESR                | 2 x initial limit                 |           |           |           |           |
| <b>Storage Life</b>          | Store at 85°C, no voltage applied, for 2000 hours. Stabilize at room temperature for 1-2 hours before measuring.   |               |               | Visual examination | no visible damage                 |           |           |           |           |
|                              |  |               |               | DCL                | 1.25 x initial limit              |           |           |           |           |
|                              |  |               |               | $\Delta C/C$       | within +10/-20% of initial value  |           |           |           |           |
|                              |  |               |               | DF                 | 1.5 x initial limit               |           |           |           |           |
|                              |  |               |               | ESR                | 2 x initial limit                 |           |           |           |           |
| <b>Humidity</b>              | Store at 65°C and 95% relative humidity for 500 hours, with no applied voltage. Stabilize at room temperature and humidity for 1-2 hours before measuring.               |               |               | Visual examination | no visible damage                 |           |           |           |           |
|                              |  |               |               | DCL                | 5 x initial limit                 |           |           |           |           |
|                              |  |               |               | $\Delta C/C$       | within +35/-5% of initial value   |           |           |           |           |
|                              |  |               |               | DF                 | 1.5 x initial limit               |           |           |           |           |
|                              |  |               |               | ESR                | 2 x initial limit                 |           |           |           |           |
| <b>Temperature Stability</b> | Step   | Temperature°C | Duration(min) |                    |                                   |           |           |           |           |
|                              | 1  | +20           | 15            |                    | +20°C                             | -55°C     | +20°C     | +85°C     | +20°C     |
|                              | 2  | -55           | 15            | DCL                | IL*                               | n/a       | IL*       | 10 x IL*  | IL*       |
|                              | 3  | +20           | 15            | $\Delta C/C$       | n/a                               | +0/-20%   | $\pm 5\%$ | +20/-0%   | $\pm 5\%$ |
|                              | 4  | +85           | 15            | DF                 | IL*                               | 1.5 x IL* | IL*       | 1.5 x IL* | IL*       |
|                              | 5  | +20           | 15            |                    |                                   |           |           |           |           |
| <b>Surge Voltage</b>         | Apply 1.3x rated voltage (Ur) at 85°C for 1000 cycles of duration 6 min (30 sec charge, 5 min 30 sec discharge) through a charge / discharge resistance of 1000 $\Omega$ |               |               | Visual examination | no visible damage                 |           |           |           |           |
|                              |  |               |               | DCL                | initial limit                     |           |           |           |           |
|                              |  |               |               | $\Delta C/C$       | within +10/-20% of initial value  |           |           |           |           |
|                              |  |               |               | DF                 | 1.25 x initial limit              |           |           |           |           |
|                              |  |               |               |                    |                                   |           |           |           |           |
| <b>Mechanical Shock</b>      | MIL-STD-202, Method 213, Condition C   |               |               | Visual examination | no visible damage                 |           |           |           |           |
|                              |  |               |               | DCL                | initial limit                     |           |           |           |           |
|                              |  |               |               | $\Delta C/C$       | within $\pm 5\%$ of initial value |           |           |           |           |
|                              |  |               |               | DF                 | initial limit                     |           |           |           |           |
|                              |  |               |               | ESR                | initial limit                     |           |           |           |           |
| <b>Vibration</b>             | MIL-STD-202, Method 204, Condition D   |               |               | Visual examination | no visible damage                 |           |           |           |           |
|                              |  |               |               | DCL                | initial limit                     |           |           |           |           |
|                              |  |               |               | $\Delta C/C$       | within $\pm 5\%$ of initial value |           |           |           |           |
|                              |  |               |               | DF                 | initial limit                     |           |           |           |           |
|                              |  |               |               | ESR                | initial limit                     |           |           |           |           |

\*Initial Limit

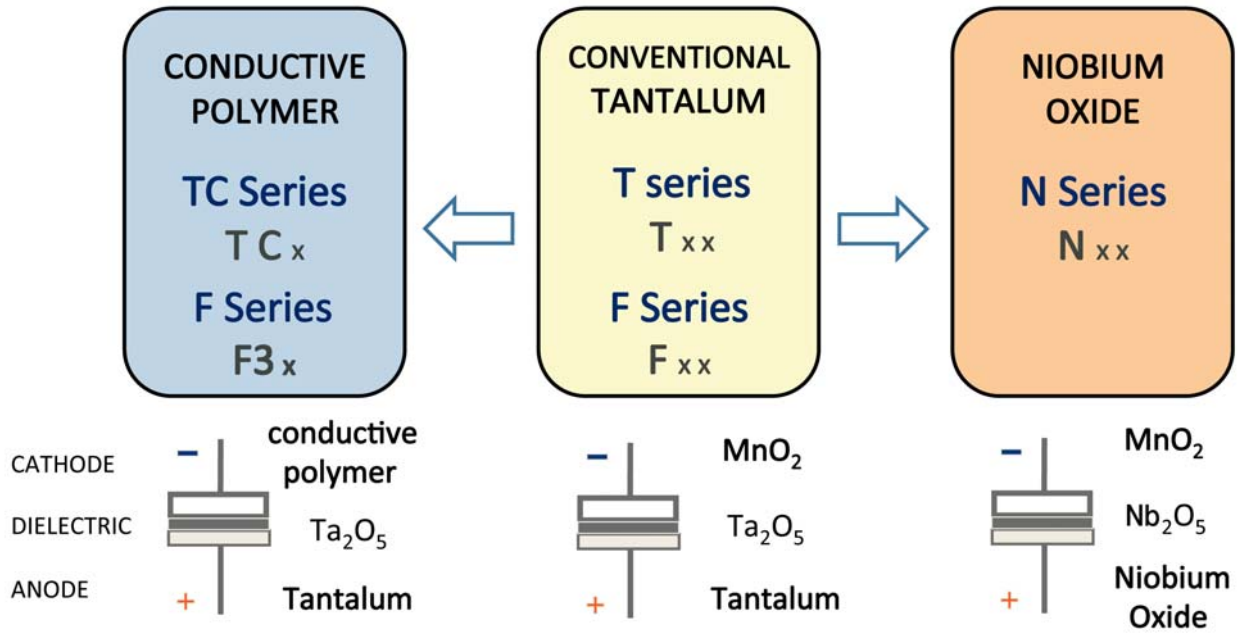
Initial measurement max. 1hr after the removal from dry pack or after pretreatment at 85°C for 24 hours.

# TCJ Series

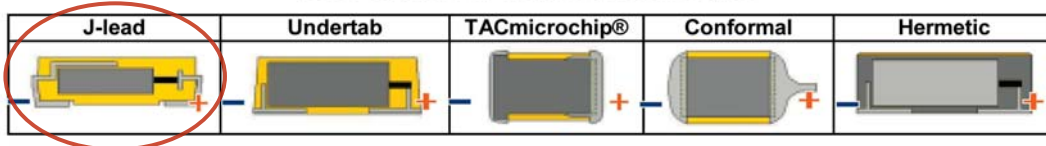


## Conductive Polymer Solid Electrolytic Chip Capacitors

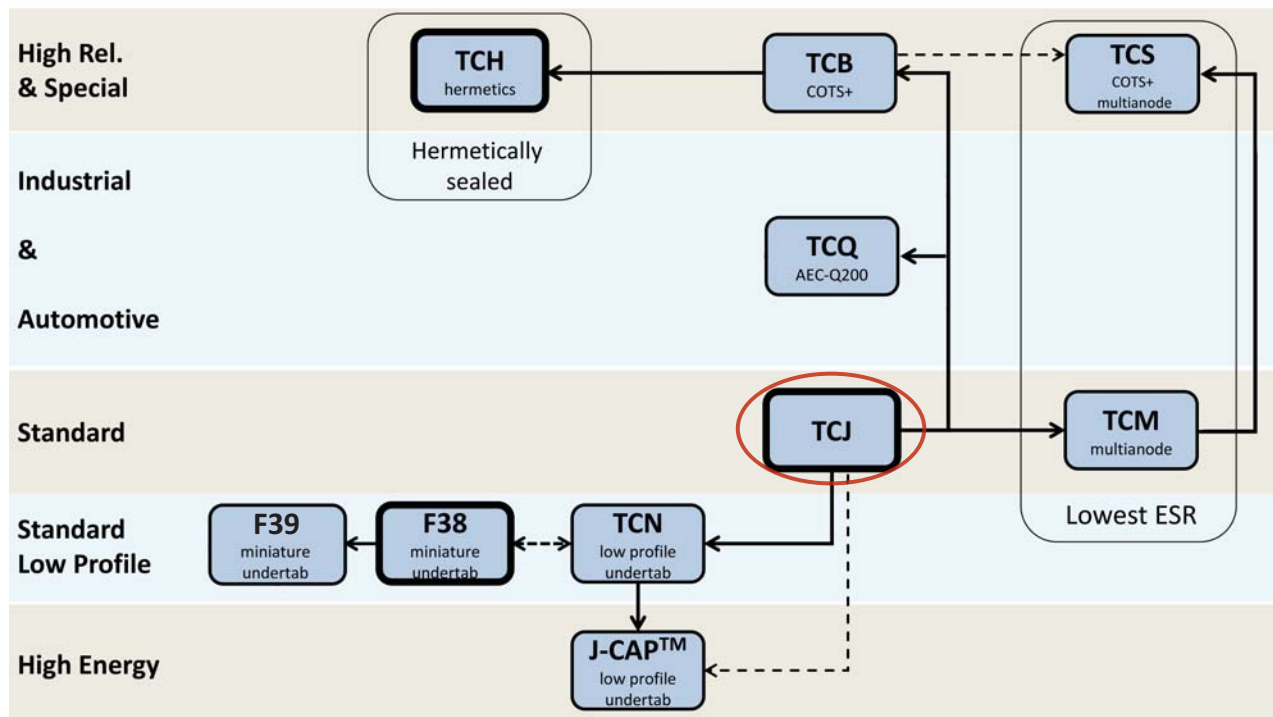
### AVX SOLID ELECTROLYTIC CAPACITOR ROADMAP



### Five Capacitor Construction Styles



### SERIES LINE UP: CONDUCTIVE POLYMER



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