

## 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)                 | 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>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(55,69,70,80,120) | B(70)<br>C(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)<br>T(200), W(70)                                            | D(45,55)<br>Y(45,55)                | D(50)<br>Y(50)                         | D(55)<br>E(45)             | 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(12,15,25,40,50)<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(12,15,25,40,50)<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)             | X(50,55,100)                                                                   |                                     | 5(100)                                 |                            |                                          |                                          |                            |                      |         |          |          |

Released ratings, (ESR ratings in mOhms in parentheses)  
Engineering samples - please contact AVX

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.

### RATINGS & PART NUMBER REFERENCE

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

### RATINGS & PART NUMBER REFERENCE

| AVX<br>Part No.  | Case<br>Size | Capacitance<br>(µF) | Rated<br>Voltage<br>(V) | Maximum<br>Operating<br>Temperature<br>(°C) | DCL<br>Max.<br>(µA) | DF<br>Max.<br>(%) | ESR<br>Max.<br>@ 100kHz<br>(mΩ) | 100kHz RMS Current (mA) |      |       |       | Product<br>Category | MSL |
|------------------|--------------|---------------------|-------------------------|---------------------------------------------|---------------------|-------------------|---------------------------------|-------------------------|------|-------|-------|---------------------|-----|
|                  |              |                     |                         |                                             |                     |                   |                                 | 45°C                    | 85°C | 105°C | 125°C |                     |     |
| TCJA156M006#0300 | A            | 15                  | 6.3                     | 125                                         | 9                   | 6                 | 300                             | 600                     | 400  | 300   | 200   | 1                   | 3   |
| TCJA226M006#0300 | A            | 22                  | 6.3                     | 125                                         | 13.2                | 6                 | 300                             | 600                     | 400  | 300   | 200   | 1                   | 3   |
| TCJK226M006#0400 | K            | 22                  | 6.3                     | 105                                         | 13.2                | 8                 | 400                             | 500                     | 400  | 200   | —     | 3                   | 3   |
| TCJN226M006#0500 | N            | 22                  | 6.3                     | 105                                         | 13.2                | 10                | 500                             | 400                     | 300  | 200   | —     | 3                   | 3   |
| TCJR226M006#0500 | R            | 22                  | 6.3                     | 105                                         | 13.2                | 10                | 500                             | 400                     | 300  | 200   | —     | 3                   | 3   |
| TCJS226M006#0400 | S            | 22                  | 6.3                     | 105                                         | 13.2                | 8                 | 400                             | 500                     | 400  | 200   | —     | 3                   | 3   |
| TCJT226M006#0150 | T            | 22                  | 6.3                     | 105                                         | 13.2                | 6                 | 150                             | 800                     | 600  | 400   | —     | 3                   | 3   |
| TCJA336M006#0200 | A            | 33                  | 6.3                     | 105                                         | 19.8                | 6                 | 200                             | 700                     | 500  | 300   | —     | 3                   | 3   |
| TCJB336M006#0070 | B            | 33                  | 6.3                     | 125                                         | 19.8                | 6                 | 70                              | 1300                    | 900  | 600   | 300   | 1                   | 3   |
| TCJB336M006#0200 | B            | 33                  | 6.3                     | 125                                         | 19.8                | 6                 | 200                             | 800                     | 600  | 400   | 200   | 1                   | 3   |
| TCJT336M006#0150 | T            | 33                  | 6.3                     | 105                                         | 19.8                | 8                 | 150                             | 800                     | 600  | 400   | —     | 3                   | 3   |
| TCJA476M006#0070 | A            | 47                  | 6.3                     | 105                                         | 28.2                | 6                 | 70                              | 1200                    | 800  | 500   | —     | 3                   | 3   |
| TCJA476M006#0100 | A            | 47                  | 6.3                     | 105                                         | 28.2                | 6                 | 100                             | 1000                    | 700  | 500   | —     | 3                   | 3   |
| TCJA476M006#0200 | A            | 47                  | 6.3                     | 105                                         | 28.2                | 6                 | 200                             | 700                     | 500  | 300   | —     | 3                   | 3   |
| TCJB476M006#0070 | B            | 47                  | 6.3                     | 125                                         | 28.2                | 6                 | 70                              | 1300                    | 900  | 600   | 300   | 1                   | 3   |
| TCJK476M006#0150 | K            | 47                  | 6.3                     | 105                                         | 28.2                | 6                 | 150                             | 800                     | 600  | 400   | —     | 3                   | 3   |
| TCJK476M006#0200 | K            | 47                  | 6.3                     | 105                                         | 28.2                | 6                 | 200                             | 700                     | 500  | 300   | —     | 3                   | 3   |
| TCJK476M006#0400 | K            | 47                  | 6.3                     | 105                                         | 28.2                | 6                 | 400                             | 500                     | 400  | 200   | —     | 3                   | 3   |
| TCJP476M006#0500 | P            | 47                  | 6.3                     | 105                                         | 28.2                | 10                | 500                             | 400                     | 300  | 200   | —     | 3                   | 3   |
| TCJR476M006#0500 | R            | 47                  | 6.3                     | 105                                         | 28.2                | 10                | 500                             | 400                     | 300  | 200   | —     | 3                   | 3   |
| TCJT476M006#0055 | T            | 47                  | 6.3                     | 105                                         | 28.2                | 8                 | 55                              | 1300                    | 900  | 600   | —     | 3                   | 3   |
| TCJT476M006#0069 | T            | 47                  | 6.3                     | 105                                         | 20                  | 8                 | 69                              | 1200                    | 800  | 500   | —     | 3                   | 3   |
| TCJT476M006#0070 | T            | 47                  | 6.3                     | 105                                         | 28.2                | 8                 | 70                              | 1200                    | 800  | 500   | —     | 3                   | 3   |
| TCJT476M006#0080 | T            | 47                  | 6.3                     | 105                                         | 28.2                | 8                 | 80                              | 1100                    | 800  | 500   | —     | 3                   | 3   |
| TCJT476M006#0120 | T            | 47                  | 6.3                     | 105                                         | 28.2                | 8                 | 120                             | 900                     | 600  | 400   | —     | 3                   | 3   |
| TCJB686M006#0055 | B            | 68                  | 6.3                     | 125                                         | 40.8                | 8                 | 55                              | 1500                    | 1100 | 700   | 400   | 1                   | 3   |
| TCJB686M006#0070 | B            | 68                  | 6.3                     | 125                                         | 40.8                | 8                 | 70                              | 1300                    | 900  | 600   | 300   | 1                   | 3   |
| TCJC686M006#0100 | C            | 68                  | 6.3                     | 125                                         | 40.8                | 6                 | 100                             | 1300                    | 900  | 600   | 300   | 1                   | 3   |
| TCJT686M006#0200 | T            | 68                  | 6.3                     | 105                                         | 40.8                | 8                 | 200                             | 700                     | 500  | 300   | —     | 3                   | 3   |
| TCJW686M006#0070 | W            | 68                  | 6.3                     | 125                                         | 40.8                | 8                 | 70                              | 1400                    | 1000 | 600   | 400   | 1                   | 3   |
| TCJA107M006#0100 | A            | 100                 | 6.3                     | 105                                         | 60                  | 10                | 100                             | 1000                    | 700  | 500   | —     | 3                   | 3   |
| TCJA107M006#0150 | A            | 100                 | 6.3                     | 105                                         | 60                  | 10                | 150                             | 800                     | 600  | 400   | —     | 3                   | 3   |
| TCJB107M006#0040 | B            | 100                 | 6.3                     | 105                                         | 60                  | 10                | 40                              | 1800                    | 1300 | 800   | —     | 3                   | 3   |
| TCJB107M006#0045 | B            | 100                 | 6.3                     | 105                                         | 60                  | 10                | 45                              | 1700                    | 1200 | 800   | —     | 3                   | 3   |
| TCJB107M006#0055 | B            | 100                 | 6.3                     | 105                                         | 60                  | 10                | 55                              | 1500                    | 1100 | 700   | —     | 3                   | 3   |
| TCJB107M006#0070 | B            | 100                 | 6.3                     | 105                                         | 60                  | 10                | 70                              | 1300                    | 900  | 600   | —     | 3                   | 3   |
| TCJT107M006#0070 | T            | 100                 | 6.3                     | 105                                         | 60                  | 10                | 70                              | 1200                    | 800  | 500   | —     | 3                   | 3   |
| TCJT107M006#0200 | T            | 100                 | 6.3                     | 105                                         | 60                  | 10                | 200                             | 700                     | 500  | 300   | —     | 3                   | 3   |
| TCJB157M006#0025 | B            | 150                 | 6.3                     | 105                                         | 90                  | 10                | 25                              | 2200                    | 1500 | 1000  | —     | 3                   | 3   |
| TCJB157M006#0035 | B            | 150                 | 6.3                     | 105                                         | 90                  | 10                | 35                              | 1900                    | 1300 | 900   | —     | 3                   | 3   |
| TCJB157M006#0045 | B            | 150                 | 6.3                     | 105                                         | 90                  | 10                | 45                              | 1700                    | 1200 | 800   | —     | 3                   | 3   |
| TCJB157M006#0055 | B            | 150                 | 6.3                     | 105                                         | 90                  | 10                | 55                              | 1500                    | 1100 | 700   | —     | 3                   | 3   |
| TCJB157M006#0070 | 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#0015 | D            | 150                 | 6.3                     | 105                                         | 90                  | 6                 | 15                              | 3900                    | 2700 | 1800  | —     | 2                   | 3   |
| TCJD157M006#0025 | D            | 150                 | 6.3                     | 105                                         | 90                  | 6                 | 25                              | 3000                    | 2100 | 1400  | —     | 2                   | 3   |
| TCJD157M006#0040 | D            | 150                 | 6.3                     | 105                                         | 90                  | 6                 | 40                              | 2400                    | 1700 | 1100  | —     | 2                   | 3   |
| TCJH157M006#0200 | H            | 150                 | 6.3                     | 105                                         | 90                  | 6                 | 200                             | 700                     | 500  | 300   | —     | 3                   | 3   |
| TCJW157M006#0040 | W            | 150                 | 6.3                     | 105                                         | 90                  | 6                 | 40                              | 1800                    | 1300 | 800   | —     | 3                   | 3   |
| TCJW157M006#0070 | 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#0025 | Y            | 150                 | 6.3                     | 105                                         | 90                  | 6                 | 25                              | 2700                    | 1900 | 1200  | —     | 2                   | 3   |
| TCJY157M006#0040 | Y            | 150                 | 6.3                     | 105                                         | 90                  | 6                 | 40                              | 2200                    | 1500 | 1000  | —     | 3                   | 3   |
| TCJB227M006#0070 | B            | 220                 | 6.3                     | 105                                         | 132                 | 10                | 70                              | 1300                    | 900  | 600   | —     | 3                   | 3   |
| TCJB227M006#0200 | 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#0015 | D            | 220                 | 6.3                     | 105                                         | 132                 | 6                 | 15                              | 3900                    | 2700 | 1800  | —     | 2                   | 3   |
| TCJD227M006#0025 | D            | 220                 | 6.3                     | 105                                         | 132                 | 6                 | 25                              | 3000                    | 2100 | 1400  | —     | 2                   | 3   |
| TCJD227M006#0035 | D            | 220                 | 6.3                     | 105                                         | 132                 | 6                 | 35                              | 2500                    | 1800 | 1100  | —     | 3                   | 3   |
| TCJD227M006#0040 | D            | 220                 | 6.3                     | 105                                         | 132                 | 6                 | 40                              | 2400                    | 1700 | 1100  | —     | 3                   | 3   |
| TCJD227M006#0050 | D            | 220                 | 6.3                     | 105                                         | 132                 | 6                 | 50                              | 2100                    | 1500 | 900   | —     | 3                   | 3   |
| TCJH227M006#0170 | 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#0025 | Y            | 220                 | 6.3                     | 105                                         | 132                 | 6                 | 25                              | 2700                    | 1900 | 1200  | —     | 2                   | 3   |
| TCJY227M006#0035 | Y            | 220                 | 6.3                     | 105                                         | 132                 | 6                 | 35                              | 2300                    | 1600 | 1000  | —     | 2                   | 3   |
| TCJY227M006#0040 | Y            | 220                 | 6.3                     | 105                                         | 132                 | 6                 | 40                              | 2200                    | 1500 | 1000  | —     | 2                   | 3   |
| TCJY227M006#0050 | 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#0015 | D            | 330                 | 6.3                     | 105                                         | 198                 | 6                 | 15                              | 3900                    | 2700 | 1800  | —     | 3                   | 3   |
| TCJD337M006#0025 | D            | 330                 | 6.3                     | 105                                         | 198                 | 6                 | 25                              | 3000                    | 2100 | 1400  | —     | 3                   | 3   |
| TCJD337M006#0040 | D            | 330                 | 6.3                     | 105                                         | 198                 | 6                 | 40                              | 2400                    | 1700 | 1100  | —     | 2                   | 3   |
| TCJD337M006#0050 | 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#0025 | Y            | 330                 | 6.3                     | 105                                         | 198                 | 12                | 25                              | 2700                    | 1900 | 1200  | —     | 3                   | 3   |
| TCJY337M006#0040 | Y            | 330                 | 6.3                     | 105                                         | 198                 | 12                | 40                              | 2200                    | 1500 | 1000  | —     | 3                   | 3   |
| TCJY337M006#0050 | Y            | 330                 | 6.3                     | 105                                         | 198                 | 12                | 50                              | 1900                    | 1300 | 900   | —     | 3                   | 3   |
| TCJX477M006#0050 | X            | 470                 | 6.3                     | 105                                         | 282                 | 6                 | 50                              | 1900                    | 1300 | 900   | —     | 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 |                  |     |
| TCJX477M006#0055  | X         | 470              | 6.3               | 105                                | 282           | 6           | 55                     | 1800                    | 1300 | 800   | —     | 3                | 3   |
| TCJX477M006#0100  | X         | 470              | 6.3               | 105                                | 282           | 6           | 100                    | 1300                    | 900  | 600   | —     | 3                | 3   |
| 10 Volt @ 85°C    |           |                  |                   |                                    |               |             |                        |                         |      |       |       |                  |     |
| TCJK475M010#0300  | K         | 4.7              | 10                | 105                                | 4.7           | 6           | 300                    | 500                     | 400  | 200   | —     | 3                | 3   |
| TCJK475M010#0500  | K         | 4.7              | 10                | 105                                | 4.7           | 6           | 500                    | 400                     | 300  | 200   | —     | 3                | 3   |
| TCJR475M010#0500  | R         | 4.7              | 10                | 105                                | 4.7           | 6           | 500                    | 400                     | 300  | 200   | —     | 3                | 3   |
| TCJA106M010#0200  | A         | 10               | 10                | 125                                | 10            | 6           | 200                    | 700                     | 500  | 300   | 200   | 1                | 3   |
| TCJA106M010#0300  | A         | 10               | 10                | 125                                | 10            | 6           | 300                    | 600                     | 400  | 300   | 200   | 1                | 3   |
| TCJA156M010#0200  | A         | 15               | 10                | 125                                | 15            | 6           | 200                    | 700                     | 500  | 300   | 200   | 1                | 3   |
| TCJB226M010#0300  | B         | 22               | 10                | 125                                | 22            | 6           | 300                    | 600                     | 400  | 300   | 200   | 1                | 3   |
| TCJT226M010#0070  | T         | 22               | 10                | 105                                | 22            | 6           | 70                     | 1200                    | 800  | 500   | —     | 3                | 3   |
| TCJT226M010#0150  | T         | 22               | 10                | 105                                | 22            | 6           | 150                    | 800                     | 600  | 400   | —     | 3                | 3   |
| TCJB336M010#0070  | B         | 33               | 10                | 125                                | 33            | 6           | 70                     | 1300                    | 900  | 600   | 300   | 1                | 3   |
| TCJB336M010#0200  | B         | 33               | 10                | 125                                | 33            | 6           | 200                    | 800                     | 600  | 400   | 200   | 1                | 3   |
| TCJC336M010#0100  | C         | 33               | 10                | 125                                | 33            | 6           | 100                    | 1300                    | 900  | 600   | 300   | 1                | 3   |
| TCJT336M010#0070  | T         | 33               | 10                | 105                                | 33            | 6           | 70                     | 1200                    | 800  | 500   | —     | 3                | 3   |
| TCJT336M010#0150  | T         | 33               | 10                | 105                                | 33            | 6           | 150                    | 800                     | 600  | 400   | —     | 3                | 3   |
| TCJB476M010#0070  | B         | 47               | 10                | 105                                | 47            | 6           | 70                     | 1300                    | 900  | 600   | —     | 3                | 3   |
| TCJC476M010#0100  | C         | 47               | 10                | 125                                | 47            | 6           | 100                    | 1300                    | 900  | 600   | 300   | 1                | 3   |
| TCJD686M010#0045  | D         | 68               | 10                | 105                                | 68            | 6           | 45                     | 2200                    | 1500 | 1000  | —     | 3                | 3   |
| TCJD686M010#0055  | D         | 68               | 10                | 105                                | 68            | 6           | 55                     | 2000                    | 1400 | 900   | —     | 3                | 3   |
| TCJY686M010#0045  | Y         | 68               | 10                | 105                                | 68            | 6           | 45                     | 2000                    | 1400 | 900   | —     | 3                | 3   |
| TCJY686M010#0055  | 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#0025  | D         | 100              | 10                | 105                                | 100           | 6           | 25                     | 3000                    | 2100 | 1400  | —     | 2                | 3   |
| TCJD107M010#0045  | D         | 100              | 10                | 105                                | 100           | 6           | 45                     | 2200                    | 1500 | 1000  | —     | 3                | 3   |
| TCJD107M010#0055  | D         | 100              | 10                | 105                                | 100           | 6           | 55                     | 2000                    | 1400 | 900   | —     | 3                | 3   |
| TCJD107M010#0080  | 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#0025  | Y         | 100              | 10                | 105                                | 100           | 6           | 25                     | 2700                    | 1900 | 1200  | —     | 2                | 3   |
| TCJY107M010#0045  | Y         | 100              | 10                | 105                                | 100           | 6           | 45                     | 2000                    | 1400 | 900   | —     | 3                | 3   |
| TCJY107M010#0055  | Y         | 100              | 10                | 105                                | 100           | 6           | 55                     | 1800                    | 1300 | 800   | —     | 3                | 3   |
| TCJD157M010#0025  | D         | 150              | 10                | 105                                | 150           | 6           | 25                     | 3000                    | 2100 | 1400  | —     | 3                | 3   |
| TCJD157M010#0040  | D         | 150              | 10                | 105                                | 150           | 6           | 40                     | 2400                    | 1700 | 1100  | —     | 3                | 3   |
| TCJD157M010#0045  | D         | 150              | 10                | 105                                | 150           | 6           | 45                     | 2200                    | 1500 | 1000  | —     | 3                | 3   |
| TCJD157M010#0055  | D         | 150              | 10                | 105                                | 150           | 6           | 55                     | 2000                    | 1400 | 900   | —     | 3                | 3   |
| TCJY157M010#0025  | Y         | 150              | 10                | 105                                | 150           | 6           | 25                     | 2700                    | 1900 | 1200  | —     | 3                | 3   |
| TCJY157M010#0040  | Y         | 150              | 10                | 105                                | 150           | 6           | 40                     | 2200                    | 1500 | 1000  | —     | 3                | 3   |
| TCJY157M010#0045  | Y         | 150              | 10                | 105                                | 150           | 6           | 45                     | 2000                    | 1400 | 900   | —     | 3                | 3   |
| TCJY157M010#0055  | Y         | 150              | 10                | 105                                | 150           | 6           | 55                     | 1800                    | 1300 | 800   | —     | 3                | 3   |
| TCJD227M010#0012  | D         | 220              | 10                | 105                                | 220           | 6           | 12                     | 4300                    | 3000 | 1900  | —     | 3                | 3   |
| TCJD227M010#0015  | D         | 220              | 10                | 105                                | 220           | 6           | 15                     | 3900                    | 2700 | 1800  | —     | 3                | 3   |
| TCJD227M010#0025  | D         | 220              | 10                | 105                                | 220           | 6           | 25                     | 3000                    | 2100 | 1400  | —     | 3                | 3   |
| TCJD227M010#0040  | D         | 220              | 10                | 105                                | 220           | 6           | 40                     | 2400                    | 1700 | 1100  | —     | 3                | 3   |
| TCJD227M010#0050  | 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#0025  | Y         | 220              | 10                | 105                                | 220           | 6           | 25                     | 2700                    | 1900 | 1200  | —     | 3                | 3   |
| TCJY227M010#0040  | Y         | 220              | 10                | 105                                | 220           | 6           | 40                     | 2200                    | 1500 | 1000  | —     | 3                | 3   |
| TCJY227M010#0050  | Y         | 220              | 10                | 105                                | 220           | 6           | 50                     | 1900                    | 1300 | 900   | —     | 3                | 3   |
| TCJD337M010#0025  | D         | 330              | 10                | 105                                | 330           | 6           | 25                     | 3000                    | 2100 | 1400  | —     | 2                | 3   |
| TCJ5337M010#0035  | 5         | 330              | 10                | 105                                | 330           | 10          | 35                     | 2600                    | 1800 | 1200  | —     | 2                | 3   |
| TCJ5337M010#0100  | 5         | 330              | 10                | 105                                | 330           | 10          | 100                    | 1500                    | 1100 | 700   | —     | 2                | 3   |
| 16 Volt @ 85°C    |           |                  |                   |                                    |               |             |                        |                         |      |       |       |                  |     |
| TCJA685M016#0200  | A         | 6.8              | 16                | 125                                | 10.9          | 6           | 200                    | 700                     | 500  | 300   | 200   | 1                | 3   |
| TCJA106M016#0200  | A         | 10               | 16                | 125                                | 16            | 6           | 200                    | 700                     | 500  | 300   | 200   | 1                | 3   |
| TCJB106M016#0100  | B         | 10               | 16                | 125                                | 16            | 6           | 100                    | 1100                    | 800  | 500   | 300   | 1                | 3   |
| TCJB106M016#0200  | B         | 10               | 16                | 125                                | 16            | 6           | 200                    | 800                     | 600  | 400   | 200   | 1                | 3   |
| TCJT106M016#0100  | T         | 10               | 16                | 125                                | 16            | 6           | 100                    | 1000                    | 700  | 500   | 300   | 1                | 3   |
| TCJT106M016#0150  | T         | 10               | 16                | 125                                | 16            | 6           | 150                    | 800                     | 600  | 400   | 200   | 1                | 3   |
| TCJT106M016#0200  | T         | 10               | 16                | 125                                | 16            | 6           | 200                    | 700                     | 500  | 300   | 200   | 1                | 3   |
| TCJB156M016#0150  | B         | 15               | 16                | 125                                | 24            | 6           | 150                    | 900                     | 600  | 400   | 200   | 1                | 3   |
| TCJB226M016#0150  | 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   |
| TCJY336M016#0045  | Y         | 33               | 16                | 105                                | 52.8          | 6           | 45                     | 2000                    | 1400 | 900   | —     | 2                | 3   |
| TCJY336M016#0060  | Y         | 33               | 16                | 105                                | 52.8          | 6           | 60                     | 1800                    | 1300 | 800   | —     | 2                | 3   |
| TCJY336M016#0070  | Y         | 33               | 16                | 105                                | 52.8          | 6           | 70                     | 1600                    | 1100 | 700   | —     | 2                | 3   |
| TCJX476M016#0045  | X         | 47               | 16                | 105                                | 75.2          | 6           | 45                     | 2000                    | 1400 | 900   | —     | 2                | 3   |
| TCJX476M016#0070  | X         | 47               | 16                | 105                                | 75.2          | 6           | 70                     | 1600                    | 1100 | 700   | —     | 2                | 3   |
| TCJY476M016#0045  | Y         | 47               | 16                | 105                                | 75.2          | 6           | 45                     | 2000                    | 1400 | 900   | —     | 2                | 3   |
| TCJY476M016#0070  | Y         | 47               | 16                | 105                                | 75.2          | 6           | 70                     | 1600                    | 1100 | 700   | —     | 2                | 3   |
| TCJD686M016#0050  | D         | 68               | 16                | 105                                | 108.8         | 6           | 50                     | 2100                    | 1500 | 900   | —     | 2                | 3   |
| TCJY686M016#0050  | Y         | 68               | 16                | 105                                | 108.8         | 6           | 50                     | 1900                    | 1300 | 900   | —     | 2                | 3   |
| TCJD107M016#0050  | D         | 100              | 16                | 105                                | 160           | 6           | 50                     | 2100                    | 1500 | 900   | —     | 2                | 3   |
| TCJE107M016#0040  | E         | 100              | 16                | 105                                | 160           | 6           | 40                     | 2500                    | 1800 | 1100  | —     | 2                | 3   |
| TCJY107M016#0050  | Y         | 100              | 16                | 105                                | 160           | 6           | 50                     | 1900                    | 1300 | 900   | —     | 2                | 3   |
| TCJD157M016#0040  | D         | 150              | 16                | 85                                 | 240           | 6           | 40                     | 2400                    | 1700 | —     | —     | 5                | 3   |
| TCJD157M016#0050  | D         | 150              | 16                | 85                                 | 240           | 6           | 50                     | 2100                    | 1500 | —     | —     | 5                | 3   |
| TCJD157M016#0070  | D         | 150              | 16                | 105                                | 240           | 6           | 70                     | 1800                    | 1300 | 800   | —     | 3                | 3   |
| TCJE157M016#0040  | E         | 150              | 16                | 105                                | 240           | 6           | 40                     | 2500                    | 1800 | 1100  | —     | 2                | 3   |
| TCJY157M016#0040  | Y         | 150              | 16                | 85                                 | 240           | 6           | 40                     | 2200                    | 1500 | —     | —     | 5                | 3   |
| TCJY157M016#0050  | Y         | 150              | 16                | 85                                 | 240           | 6           | 50                     | 1900                    | 1300 | —     | —     | 5                | 3   |
| TCJY157M016#0070  | Y         | 150              | 16                | 105                                | 240           | 6           | 70                     | 1600                    | 1100 | 700   | —     | 3                | 3   |

## 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 |                  |     |
| TCJD227M016#0050      | D         | 220              | 16                | 105                                | 352           | 10          | 50                     | 2100                    | 1500 | 900   | —     | 2                | 3   |
| TCJE337M016#0050      | E         | 330              | 16                | 105                                | 528           | 10          | 50                     | 2200                    | 1500 | 1000  | —     | 2                | 3   |
| TCJE337M016#0070      | E         | 330              | 16                | 105                                | 528           | 10          | 70                     | 1900                    | 1300 | 900   | —     | 2                | 3   |
| TCJ537M016#0100       | 5         | 330              | 16                | 105                                | 528           | 10          | 100                    | 1500                    | 1100 | 700   | —     | 2                | 3   |
| TCJ5477M016#0100      | 5         | 470              | 16                | 105                                | 752           | 10          | 100                    | 1500                    | 1100 | 700   | —     | 3                | 3   |
| <b>20 Volt @ 85°C</b> |           |                  |                   |                                    |               |             |                        |                         |      |       |       |                  |     |
| TCJA106M020#0150      | A         | 10               | 20                | 105                                | 20            | 6           | 150                    | 800                     | 600  | 400   | —     | 3                | 3   |
| TCJB226M020#0090      | B         | 22               | 20                | 105                                | 44            | 6           | 90                     | 1200                    | 800  | 500   | —     | 3                | 3   |
| TCJB226M020#0150      | B         | 22               | 20                | 105                                | 44            | 6           | 150                    | 900                     | 600  | 400   | —     | 3                | 3   |
| TCJY226M020#0070      | Y         | 22               | 20                | 105                                | 44            | 6           | 70                     | 1600                    | 1100 | 700   | —     | 2                | 3   |
| TCJY336M020#0070      | Y         | 33               | 20                | 105                                | 66            | 6           | 70                     | 1600                    | 1100 | 700   | —     | 2                | 3   |
| TCJD476M020#0055      | D         | 47               | 20                | 105                                | 94            | 6           | 55                     | 2000                    | 1400 | 900   | —     | 2                | 3   |
| TCJX476M020#0055      | X         | 47               | 20                | 105                                | 94            | 6           | 55                     | 1800                    | 1300 | 800   | —     | 3                | 3   |
| TCJX476M020#0070      | X         | 47               | 20                | 105                                | 94            | 6           | 70                     | 1600                    | 1100 | 700   | —     | 3                | 3   |
| TCJY476M020#0070      | Y         | 47               | 20                | 105                                | 94            | 6           | 70                     | 1600                    | 1100 | 700   | —     | 2                | 3   |
| TCJD686M020#0055      | D         | 68               | 20                | 105                                | 136           | 6           | 55                     | 2000                    | 1400 | 900   | —     | 3                | 3   |
| TCJE686M020#0045      | E         | 68               | 20                | 105                                | 136           | 6           | 45                     | 2400                    | 1700 | 1100  | —     | 2                | 3   |
| TCJD107M020#0055      | D         | 100              | 20                | 105                                | 200           | 6           | 55                     | 2000                    | 1400 | 900   | —     | 2                | 3   |
| TCJE107M020#0045      | E         | 100              | 20                | 105                                | 200           | 6           | 45                     | 2400                    | 1700 | 1100  | —     | 3                | 3   |
| TCJY107M020#0055      | Y         | 100              | 20                | 105                                | 200           | 6           | 55                     | 1800                    | 1300 | 800   | —     | 2                | 3   |
| TCJU227M020#0070E     | U         | 220              | 20                | 105                                | 440           | 12          | 70                     | 2300                    | 1600 | 1000  | —     | 2                | 3   |
| <b>25 Volt @ 85°C</b> |           |                  |                   |                                    |               |             |                        |                         |      |       |       |                  |     |
| TCJP105M025#0500      | P         | 1.0              | 25                | 105                                | 2.5           | 6           | 500                    | 400                     | 300  | 200   | —     | 2                | 3   |
| TCJB475M025#0100      | B         | 4.7              | 25                | 105                                | 11.8          | 6           | 100                    | 1100                    | 800  | 500   | —     | 3                | 3   |
| TCJB475M025#0150      | B         | 4.7              | 25                | 105                                | 11.8          | 6           | 150                    | 900                     | 600  | 400   | —     | 3                | 3   |
| TCJA685M025#0150      | A         | 6.8              | 25                | 105                                | 17            | 6           | 150                    | 800                     | 600  | 400   | —     | 3                | 3   |
| TCJB685M025#0090      | B         | 6.8              | 25                | 105                                | 17            | 6           | 90                     | 1200                    | 800  | 500   | —     | 2                | 3   |
| TCJB685M025#0150      | B         | 6.8              | 25                | 105                                | 17            | 6           | 150                    | 900                     | 600  | 400   | —     | 3                | 3   |
| TCJT685M025#0100      | T         | 6.8              | 25                | 105                                | 17            | 6           | 100                    | 1000                    | 700  | 500   | —     | 3                | 3   |
| TCJT685M025#0150      | T         | 6.8              | 25                | 105                                | 17            | 6           | 150                    | 800                     | 600  | 400   | —     | 3                | 3   |
| TCJA106M025#0150      | A         | 10               | 25                | 105                                | 25            | 6           | 150                    | 800                     | 600  | 400   | —     | 3                | 3   |
| TCJB106M025#0090      | B         | 10               | 25                | 105                                | 25            | 6           | 90                     | 1200                    | 800  | 500   | —     | 2                | 3   |
| TCJB106M025#0100      | B         | 10               | 25                | 105                                | 25            | 6           | 100                    | 1100                    | 800  | 500   | —     | 2                | 3   |
| TCJB106M025#0150      | B         | 10               | 25                | 105                                | 25            | 6           | 150                    | 900                     | 600  | 400   | —     | 2                | 3   |
| TCJB156M025#0100      | B         | 15               | 25                | 105                                | 37.5          | 6           | 100                    | 1100                    | 800  | 500   | —     | 2                | 3   |
| TCJB156M025#0150      | B         | 15               | 25                | 105                                | 37.5          | 6           | 150                    | 900                     | 600  | 400   | —     | 2                | 3   |
| TCJY156M025#0090      | Y         | 15               | 25                | 105                                | 37.5          | 6           | 90                     | 1400                    | 1000 | 600   | —     | 2                | 3   |
| TCJB226M025#0100      | B         | 22               | 25                | 105                                | 55            | 6           | 100                    | 1100                    | 800  | 500   | —     | 3                | 3   |
| TCJB226M025#0150      | B         | 22               | 25                | 105                                | 55            | 6           | 150                    | 900                     | 600  | 400   | —     | 3                | 3   |
| TCJC226M025#0100      | C         | 22               | 25                | 105                                | 55            | 6           | 100                    | 1300                    | 900  | 600   | —     | 3                | 3   |
| TCJD226M025#0060      | D         | 22               | 25                | 105                                | 55            | 6           | 60                     | 1900                    | 1300 | 900   | —     | 2                | 3   |
| TCJD226M025#0100      | D         | 22               | 25                | 105                                | 55            | 6           | 100                    | 1500                    | 1100 | 700   | —     | 2                | 3   |
| TCJY226M025#0070      | Y         | 22               | 25                | 105                                | 55            | 6           | 70                     | 1600                    | 1100 | 700   | —     | 3                | 3   |
| TCJD336M025#0060      | D         | 33               | 25                | 105                                | 82.5          | 6           | 60                     | 1900                    | 1300 | 900   | —     | 2                | 3   |
| TCJD336M025#0100      | D         | 33               | 25                | 105                                | 82.5          | 6           | 100                    | 1500                    | 1100 | 700   | —     | 2                | 3   |
| TCJX336M025#0070      | X         | 33               | 25                | 105                                | 82.5          | 6           | 70                     | 1600                    | 1100 | 700   | —     | 2                | 3   |
| TCJX336M025#0100      | X         | 33               | 25                | 105                                | 82.5          | 6           | 100                    | 1300                    | 900  | 600   | —     | 2                | 3   |
| TCJY336M025#0060      | Y         | 33               | 25                | 105                                | 82.5          | 6           | 60                     | 1800                    | 1300 | 800   | —     | 2                | 3   |
| TCJY336M025#0070      | Y         | 33               | 25                | 105                                | 82.5          | 6           | 70                     | 1600                    | 1100 | 700   | —     | 2                | 3   |
| TCJY336M025#0100      | Y         | 33               | 25                | 105                                | 82.5          | 6           | 100                    | 1400                    | 1000 | 600   | —     | 2                | 3   |
| TCJD476M025#0060      | D         | 47               | 25                | 105                                | 117.5         | 6           | 60                     | 1900                    | 1300 | 900   | —     | 3                | 3   |
| TCJD476M025#0100      | D         | 47               | 25                | 105                                | 117.5         | 6           | 100                    | 1500                    | 1100 | 700   | —     | 3                | 3   |
| TCJE476M025#0050      | 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#0070      | D         | 68               | 25                | 105                                | 170           | 6           | 70                     | 1800                    | 1300 | 800   | —     | 2                | 3   |
| TCJE686M025#0050      | 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#0055      | D         | 100              | 25                | 105                                | 250           | 6           | 55                     | 2000                    | 1400 | 900   | —     | 2                | 3   |
| TCJD107M025#0070      | D         | 100              | 25                | 105                                | 250           | 6           | 70                     | 1800                    | 1300 | 800   | —     | 2                | 3   |
| TCJE107M025#0080      | E         | 100              | 25                | 105                                | 250           | 6           | 80                     | 1800                    | 1300 | 800   | —     | 2                | 3   |
| TCJU107M025#0070E     | U         | 100              | 25                | 125                                | 250           | 12          | 70                     | 2300                    | 1600 | 1000  | 600   | 1                | 3   |
| TCJU157M025#0070E     | U         | 150              | 25                | 105                                | 375           | 12          | 70                     | 2300                    | 1600 | 1000  | —     | 2                | 3   |
| <b>35 Volt @ 85°C</b> |           |                  |                   |                                    |               |             |                        |                         |      |       |       |                  |     |
| TCJB155M035#0200      | B         | 1.5              | 35                | 105                                | 5.3           | 6           | 200                    | 800                     | 600  | 400   | —     | 2                | 3   |
| TCJB225M035#0200      | B         | 2.2              | 35                | 105                                | 7.7           | 6           | 200                    | 800                     | 600  | 400   | —     | 3                | 3   |
| TCJB335M035#0200      | B         | 3.3              | 35                | 105                                | 11.6          | 6           | 200                    | 800                     | 600  | 400   | —     | 3                | 3   |
| TCJB475M035#0200      | B         | 4.7              | 35                | 105                                | 16.5          | 6           | 200                    | 800                     | 600  | 400   | —     | 3                | 3   |
| TCJC475M035#0200      | C         | 4.7              | 35                | 105                                | 16.5          | 6           | 200                    | 900                     | 600  | 400   | —     | 3                | 3   |
| TCJC685M035#0200      | C         | 6.8              | 35                | 105                                | 23.8          | 6           | 200                    | 900                     | 600  | 400   | —     | 3                | 3   |
| TCJB106M035#0200      | B         | 10               | 35                | 105                                | 35            | 6           | 200                    | 800                     | 600  | 400   | —     | 2                | 3   |
| TCJC106M035#0200      | C         | 10               | 35                | 105                                | 35            | 6           | 200                    | 900                     | 600  | 400   | —     | 3                | 3   |
| TCJY106M035#0070      | Y         | 10               | 35                | 105                                | 35            | 6           | 70                     | 1600                    | 1100 | 700   | —     | 2                | 3   |
| TCJB156M035#0200      | B         | 15               | 35                | 105                                | 52.5          | 6           | 200                    | 800                     | 600  | 400   | —     | 2                | 3   |
| TCJC156M035#0200      | C         | 15               | 35                | 105                                | 52.5          | 6           | 200                    | 900                     | 600  | 400   | —     | 3                | 3   |
| TCJD156M035#0070      | D         | 15               | 35                | 105                                | 52.5          | 6           | 70                     | 1800                    | 1300 | 800   | —     | 3                | 3   |
| TCJD156M035#0100      | D         | 15               | 35                | 105                                | 52.5          | 6           | 100                    | 1500                    | 1100 | 700   | —     | 3                | 3   |
| TCJY156M035#0070      | Y         | 15               | 35                | 105                                | 52.5          | 6           | 70                     | 1600                    | 1100 | 700   | —     | 3                | 3   |
| TCJY156M035#0100      | Y         | 15               | 35                | 105                                | 52.5          | 6           | 100                    | 1400                    | 1000 | 600   | —     | 3                | 3   |
| TCJD226M035#0070      | 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#0100       | D         | 22               | 35                | 105                                | 77            | 6           | 100                    | 1500                    | 1100 | 700   | —     | 2                | 3   |
| TCJY226M035#0150       | Y         | 22               | 35                | 105                                | 77            | 6           | 150                    | 1100                    | 800  | 500   | —     | 3                | 3   |
| TCJD336M035#0070       | D         | 33               | 35                | 105                                | 115.5         | 6           | 70                     | 1800                    | 1300 | 800   | —     | 2                | 3   |
| TCJD336M035#0100       | D         | 33               | 35                | 105                                | 115.5         | 6           | 100                    | 1500                    | 1100 | 700   | —     | 2                | 3   |
| TCJE336M035#0055       | E         | 33               | 35                | 105                                | 115.5         | 6           | 55                     | 2100                    | 1500 | 900   | —     | 3                | 3   |
| TCJE336M035#0070       | E         | 33               | 35                | 105                                | 115.5         | 6           | 70                     | 1900                    | 1300 | 900   | —     | 3                | 3   |
| TCJU336M035#0070E      | 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#0055       | E         | 47               | 35                | 105                                | 164.5         | 6           | 55                     | 2100                    | 1500 | 900   | —     | 2                | 3   |
| TCJU476M035#0070E      | 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#0400       | B         | 0.68             | 50                | 105                                | 3.4           | 6           | 400                    | 600                     | 400  | 300   | —     | 3                | 3   |
| TCJB105M050#0300       | B         | 1.0              | 50                | 105                                | 5             | 6           | 300                    | 600                     | 400  | 300   | —     | 3                | 3   |
| TCJB155M050#0300       | B         | 1.5              | 50                | 105                                | 7.5           | 6           | 300                    | 600                     | 400  | 300   | —     | 3                | 3   |
| TCJC155M050#0300       | C         | 1.5              | 50                | 105                                | 7.5           | 6           | 300                    | 800                     | 600  | 400   | —     | 3                | 3   |
| TCJC225M050#0300       | C         | 2.2              | 50                | 105                                | 11            | 6           | 300                    | 800                     | 600  | 400   | —     | 3                | 3   |
| TCJC335M050#0200       | C         | 3.3              | 50                | 105                                | 16.5          | 8           | 200                    | 900                     | 600  | 400   | —     | 3                | 3   |
| TCJC475M050#0200       | C         | 4.7              | 50                | 105                                | 23.5          | 8           | 200                    | 900                     | 600  | 400   | —     | 3                | 3   |
| TCJX475M050#0250       | X         | 4.7              | 50                | 105                                | 23.5          | 6           | 250                    | 800                     | 600  | 400   | —     | 2                | 5   |
| TCJY475M050#0250       | Y         | 4.7              | 50                | 105                                | 23.5          | 6           | 250                    | 900                     | 600  | 400   | —     | 2                | 5   |
| TCJC685M050#0200       | C         | 6.8              | 50                | 105                                | 34            | 8           | 200                    | 900                     | 600  | 400   | —     | 3                | 3   |
| TCJD685M050#0120       | D         | 6.8              | 50                | 105                                | 34            | 10          | 120                    | 1400                    | 1000 | 600   | —     | 3                | 3   |
| TCJD106M050#0090       | D         | 10               | 50                | 105                                | 50            | 10          | 90                     | 1600                    | 1100 | 700   | —     | 3                | 3   |
| TCJD106M050#0120       | D         | 10               | 50                | 105                                | 50            | 10          | 120                    | 1400                    | 1000 | 600   | —     | 3                | 3   |
| TCJE106M050#0070       | E         | 10               | 50                | 105                                | 50            | 6           | 70                     | 1900                    | 1300 | 900   | —     | 3                | 3   |
| TCJE106M050#0100       | E         | 10               | 50                | 105                                | 50            | 6           | 100                    | 1600                    | 1100 | 700   | —     | 3                | 3   |
| TCJE156M050#0070       | E         | 15               | 50                | 105                                | 75            | 6           | 70                     | 1900                    | 1300 | 900   | —     | 3                | 3   |
| TCJE156M050#0100       | E         | 15               | 50                | 105                                | 75            | 6           | 100                    | 1600                    | 1100 | 700   | —     | 3                | 3   |
| <b>63 Volt @ 85°C</b>  |           |                  |                   |                                    |               |             |                        |                         |      |       |       |                  |     |
| TCJB474M063#0400       | B         | 0.47             | 63                | 105                                | 3             | 8           | 400                    | 600                     | 400  | 300   | —     | 3                | 3   |
| TCJB684M063#0300       | B         | 0.68             | 63                | 105                                | 4.3           | 8           | 300                    | 600                     | 400  | 300   | —     | 3                | 3   |
| TCJB105M063#0300       | B         | 1.0              | 63                | 105                                | 6.3           | 8           | 300                    | 600                     | 400  | 300   | —     | 3                | 3   |
| TCJC105M063#0300       | C         | 1.0              | 63                | 105                                | 6.3           | 6           | 300                    | 800                     | 600  | 400   | —     | 3                | 3   |
| TCJC155M063#0300       | C         | 1.5              | 63                | 105                                | 9.5           | 6           | 300                    | 800                     | 600  | 400   | —     | 3                | 3   |
| TCJC225M063#0200       | C         | 2.2              | 63                | 105                                | 13.9          | 6           | 200                    | 900                     | 600  | 400   | —     | 3                | 3   |
| TCJC335M063#0200       | C         | 3.3              | 63                | 105                                | 20.8          | 6           | 200                    | 900                     | 600  | 400   | —     | 3                | 3   |
| TCJC475M063#0200       | C         | 4.7              | 63                | 105                                | 29.6          | 6           | 200                    | 900                     | 600  | 400   | —     | 3                | 3   |
| TCJD475M063#0120       | D         | 4.7              | 63                | 105                                | 29.6          | 6           | 120                    | 1400                    | 1000 | 600   | —     | 3                | 3   |
| TCJD685M063#0120       | D         | 6.8              | 63                | 105                                | 42.8          | 6           | 120                    | 1400                    | 1000 | 600   | —     | 3                | 3   |
| TCJE685M063#0100       | E         | 6.8              | 63                | 105                                | 42.8          | 6           | 100                    | 1600                    | 1100 | 700   | —     | 3                | 3   |
| TCJE685M063#0150       | E         | 6.8              | 63                | 105                                | 42.8          | 6           | 150                    | 1300                    | 900  | 600   | —     | 3                | 3   |
| TCJE106M063#0100       | E         | 10               | 63                | 105                                | 63            | 6           | 100                    | 1600                    | 1100 | 700   | —     | 3                | 3   |
| TCJE106M063#0150       | E         | 10               | 63                | 105                                | 63            | 6           | 150                    | 1300                    | 900  | 600   | —     | 3                | 3   |
| <b>75 Volt @ 85°C</b>  |           |                  |                   |                                    |               |             |                        |                         |      |       |       |                  |     |
| TCJD475M075#0150       | D         | 4.7              | 75                | 105                                | 35.3          | 6           | 150                    | 1200                    | 800  | 500   | —     | 3                | 3   |
| TCJD685M075#0120       | D         | 6.8              | 75                | 105                                | 51            | 6           | 120                    | 1400                    | 1000 | 600   | —     | 3                | 3   |
| <b>100 Volt @ 85°C</b> |           |                  |                   |                                    |               |             |                        |                         |      |       |       |                  |     |
| TCJD475M100#0250       | D         | 4.7              | 100               | 105                                | 47            | 8           | 250                    | 900                     | 600  | 400   | —     | 4                | 3   |
| <b>125 Volt @ 85°C</b> |           |                  |                   |                                    |               |             |                        |                         |      |       |       |                  |     |
| TCJD335M125#0250       | 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.

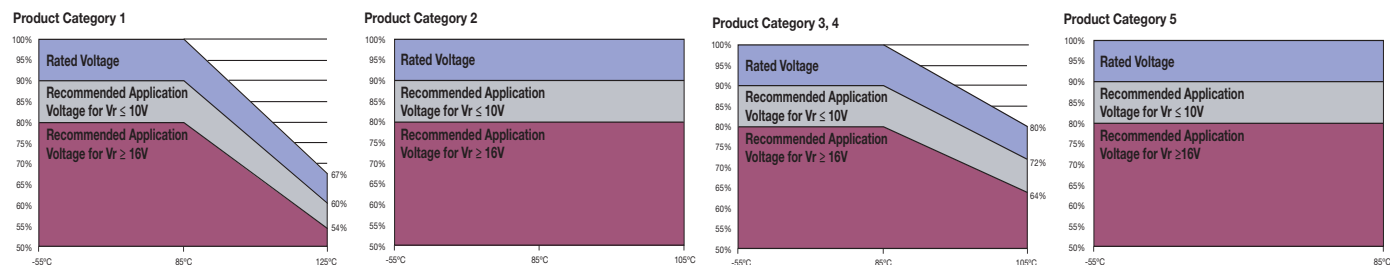
ESR allowed to move up to 1.25 times catalog limit post mounting.

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 $\pm 20\%$ 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 $\pm 20\%$ 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 +30/-20% 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                                                                                                       |  |  |  |  |  |
| <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 for Vr $\leq$ 10V<br>within +20/-30% of initial value for Vr $\geq$ 16V |  |  |  |  |  |
|                              |                                                                                                                                                                                                            | 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    |                                                                                                |           |       |           |            |       |  |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---------------|--------------------|------------------------------------------------------------------------------------------------|-----------|-------|-----------|------------|-------|--|
| Endurance             | Apply rated voltage (Ur) at 85°C for 2000 hours through a circuit impedance of ≤0.1Ω/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 ≤0.1Ω/V Always stabilize at room temperature for 1-2 hours before measuring. |               |               | Visual examination | no visible damage                                                                              |           |       |           |            |       |  |
|                       |                                                                                                                                                                                                                                                                                                                                   |               |               | DCL                | 1.25 x initial limit                                                                           |           |       |           |            |       |  |
|                       |                                                                                                                                                                                                                                                                                                                                   |               |               | ΔC/C               | within ±20% of initial value                                                                   |           |       |           |            |       |  |
|                       |                                                                                                                                                                                                                                                                                                                                   |               |               | DF                 | 1.5 x initial limit                                                                            |           |       |           |            |       |  |
|                       |                                                                                                                                                                                                                                                                                                                                   |               |               | ESR                | 2 x initial limit                                                                              |           |       |           |            |       |  |
| Storage Life          | 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 (VR ≤ 75V)     | 1.25 x initial limit                                                                           |           |       |           |            |       |  |
|                       |                                                                                                                                                                                                                                                                                                                                   |               |               | DCL (VR > 75V)     | 2 x initial limit                                                                              |           |       |           |            |       |  |
|                       |                                                                                                                                                                                                                                                                                                                                   |               |               | ΔC/C               | within ±20% of initial value                                                                   |           |       |           |            |       |  |
|                       |                                                                                                                                                                                                                                                                                                                                   |               |               | DF                 | 1.5 x initial limit                                                                            |           |       |           |            |       |  |
|                       |                                                                                                                                                                                                                                                                                                                                   |               |               | ESR                | 2 x initial limit                                                                              |           |       |           |            |       |  |
| Humidity              | 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                                                                              |           |       |           |            |       |  |
|                       |                                                                                                                                                                                                                                                                                                                                   |               |               | ΔC/C               | within +30/-20% of initial value                                                               |           |       |           |            |       |  |
|                       |                                                                                                                                                                                                                                                                                                                                   |               |               | DF                 | 1.5 x initial limit                                                                            |           |       |           |            |       |  |
|                       |                                                                                                                                                                                                                                                                                                                                   |               |               | ESR                | 2 x initial limit                                                                              |           |       |           |            |       |  |
| Temperature Stability | Step                                                                                                                                                                                                                                                                                                                              | Temperature°C | Duration(min) |                    | +20°C                                                                                          | -55°C     | +20°C | +85°C     | +105°C     | +20°C |  |
|                       | 1                                                                                                                                                                                                                                                                                                                                 | +20           | 15            |                    |                                                                                                |           |       |           |            |       |  |
|                       | 2                                                                                                                                                                                                                                                                                                                                 | -55           | 15            | DCL                | IL*                                                                                            | n/a       | IL*   | 10 x IL*  | 12.5 x IL* | IL*   |  |
|                       | 3                                                                                                                                                                                                                                                                                                                                 | +20           | 15            |                    |                                                                                                |           |       |           |            |       |  |
|                       | 4                                                                                                                                                                                                                                                                                                                                 | +85           | 15            | ΔC/C               | n/a                                                                                            | +0/-20%   | ±5%   | +20/-0%   | +30/-0%    | ±5%   |  |
|                       | 5                                                                                                                                                                                                                                                                                                                                 | +105          | 15            |                    |                                                                                                |           |       |           |            |       |  |
|                       | 6                                                                                                                                                                                                                                                                                                                                 | +20           | 15            | DF                 | IL*                                                                                            | 1.5 x IL* | IL*   | 1.5 x IL* | 2 x IL*    | IL*   |  |
| Surge Voltage         | 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 1000Ω                                                                                |               |               | Visual examination | no visible damage                                                                              |           |       |           |            |       |  |
|                       |                                                                                                                                                                                                                                                                                                                                   |               |               | DCL                | initial limit                                                                                  |           |       |           |            |       |  |
|                       |                                                                                                                                                                                                                                                                                                                                   |               |               | ΔC/C               | within +10/-20% of initial value for Vr ≤ 10V<br>within +20/-30% of initial value for Vr ≥ 16V |           |       |           |            |       |  |
|                       |                                                                                                                                                                                                                                                                                                                                   |               |               | DF                 | 1.25 x initial limit                                                                           |           |       |           |            |       |  |
| Mechanical Shock      | MIL-STD-202, Method 213, Condition C                                                                                                                                                                                                                                                                                              |               |               | Visual examination | no visible damage                                                                              |           |       |           |            |       |  |
|                       |                                                                                                                                                                                                                                                                                                                                   |               |               | DCL                | initial limit                                                                                  |           |       |           |            |       |  |
|                       |                                                                                                                                                                                                                                                                                                                                   |               |               | ΔC/C               | within ±5% of initial value                                                                    |           |       |           |            |       |  |
|                       |                                                                                                                                                                                                                                                                                                                                   |               |               | DF                 | initial limit                                                                                  |           |       |           |            |       |  |
|                       |                                                                                                                                                                                                                                                                                                                                   |               |               | ESR                | initial limit                                                                                  |           |       |           |            |       |  |
| Vibration             | MIL-STD-202, Method 204, Condition D                                                                                                                                                                                                                                                                                              |               |               | Visual examination | no visible damage                                                                              |           |       |           |            |       |  |
|                       |                                                                                                                                                                                                                                                                                                                                   |               |               | DCL                | initial limit                                                                                  |           |       |           |            |       |  |
|                       |                                                                                                                                                                                                                                                                                                                                   |               |               | ΔC/C               | within ±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 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 $\pm 20\%$ 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 $\pm 20\%$ 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 $+40/-20\%$ 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                                                                                                                                                                        | +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 for $V_r \leq 10V$<br>within $+20/-30\%$ of initial value for $V_r \geq 16V$ |  |  |  |
|                              |                                                                                                                                                                          | 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

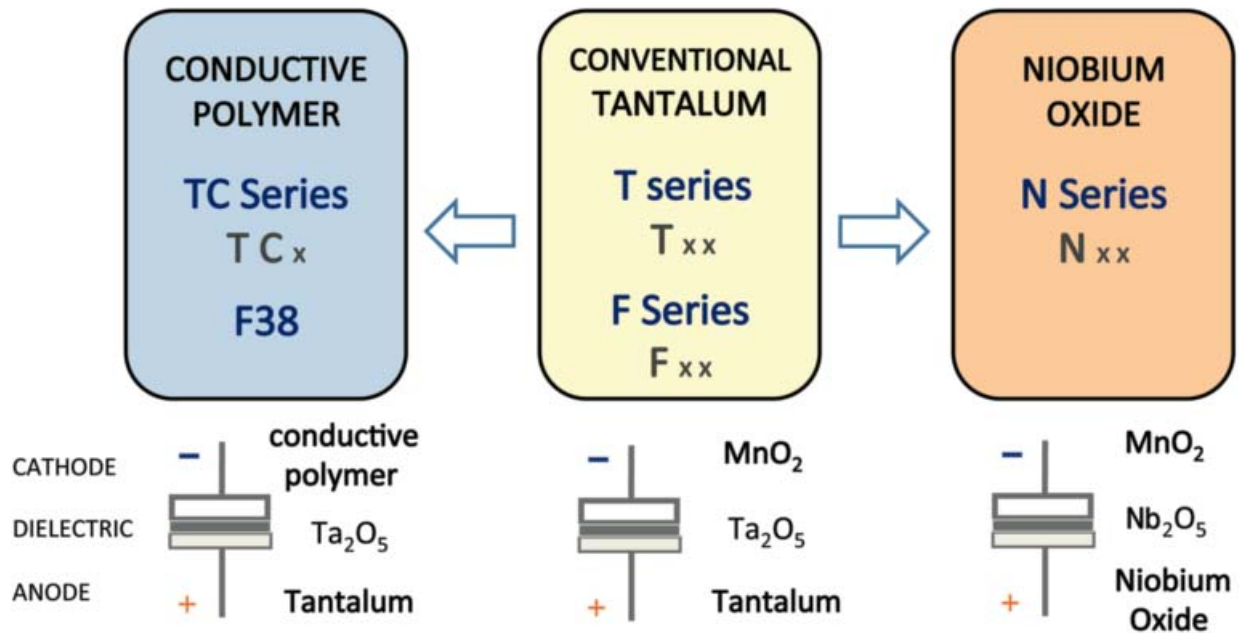
Initial measurement max. 1hr after the removal from dry pack or after pretreatment at 85°C for 24 hours.

# TCJ Series

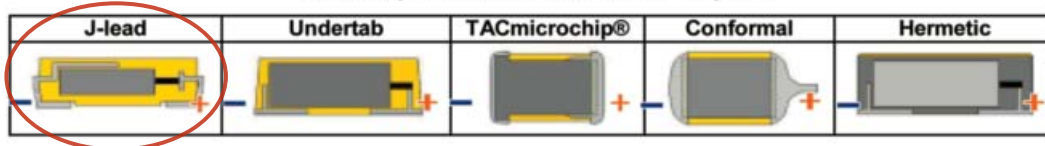
## Conductive Polymer Solid Electrolytic Chip Capacitors



### AVX SOLID ELECTROLYTIC CAPACITOR ROADMAP



### Five Capacitor Construction Styles



### SERIES LINE UP: CONDUCTIVE POLYMER

