# THE DATASHEET OF

# TCJ5477M016R0100

# TCJ Series

## Conductive Polymer Solid Electrolytic Chip Capacitors

### FEATURES

- Conductive Polymer Electrode
- Benign Failure Mode Under Recommended Use Conditions
- Lower ESR
- 3x reflow cycles according to J-STD-020
- 100% Surge Current Tested
- CV Range: 0.47-680µF / 2.5-125V
- 17 Case Sizes Available

### APPLICATIONS

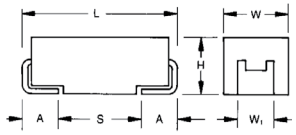
- Smart Phone, Tablets, Notebook, LCD TV, Power Supplies

Elektra Award 2010

LEAD-FREE

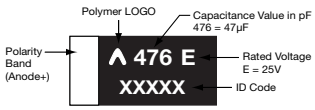
LEAD-FREE COMPATIBLE COMPONENT

RoHS COMPLIANT

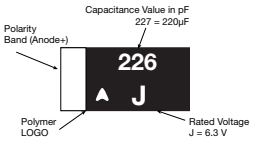



### MARKING

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




#### N, P, R CASE




### CASE DIMENSIONS:

millimeters (inches)

| Code | EIA Code | EIA Metric | L±0.20 (0.008) | W+0.20 (0.008) −0.10 (0.004) | H+0.20 (0.008) −0.10 (0.004) | $W_1$ ±0.20 (0.008) | A+0.30 (0.012) −0.20 (0.008) | S Min. |
|---|---|---|---|---|---|---|---|---|
| A | 1206 | 3216-18 | 3.20 (0.126) | 1.60 (0.063) | 1.60 (0.063) | 1.20 (0.047) | 0.80 (0.031) | 1.10 (0.043) |
| B | 1210 | 3528-21 | 3.50 (0.138) | 2.80 (0.110) | 1.90 (0.075) | 2.20 (0.087) | 0.80 (0.031) | 1.40 (0.055) |
| C | 2312 | 6032-28 | 6.00 (0.236) | 3.20 (0.126) | 2.60 (0.102) | 2.20 (0.087) | 1.30 (0.051) | 2.90 (0.114) |
| D | 2917 | 7343-31 | 7.30 (0.287) | 4.30 (0.169) | 2.90 (0.114) | 2.40 (0.094) | 1.30 (0.051) | 4.40 (0.173) |
| E | 2917 | 7343-43 | 7.30 (0.287) | 4.30 (0.169) | 4.10 (0.162) | 2.40 (0.094) | 1.30 (0.051) | 4.40 (0.173) |
| H | 1210 | 3528-15 | 3.50 (0.138) | 2.80 (0.110) | 1.50 (0.059) max | 2.20 (0.087) | 0.80 (0.031) | 1.40 (0.055) |
| K | 1206 | 3216-10 | 3.20 (0.126) | 1.60 (0.063) | 1.00 (0.039) max | 1.20 (0.047) | 0.80 (0.031) | 1.10 (0.043) |
| N | 0805 | 2012-10 | 2.05 (0.081) | 1.30 (0.051) | 1.00 (0.039) max. | 1.00 (0.039) | 0.50 (0.20) | 0.85 (0.033) |
| P | 0805 | 2012-15 | 2.05 (0.081) | 1.35 (0.053) | 1.50 (0.059) max | 1.00±0.10 (0.039±0.004) | 0.50 (0.020) | 0.85 (0.033) |
| R | 0805 | 2012-12 | 2.05 (0.081) | 1.30 (0.051) | 1.20 (0.047) max. | 1.00 ± 0.10 (0.039 ± 0.004) | 0.50 (0.020) | 0.85 (0.033) |
| S | 1206 | 3216-12 | 3.20 (0.126) | 1.60 (0.063) | 1.20 (0.047) max | 1.20 (0.047) | 0.80 (0.031) | 1.10 (0.043) |
| T | 1210 | 3528-12 | 3.50 (0.138) | 2.80 (0.110) | 1.20 (0.047) max | 2.20 (0.087) | 0.80 (0.031) | 1.40 (0.055) |
| U | 2924 | 7361-43 | 7.30 (0.287) | 6.10 (0.240) | 4.10 (0.162) | 3.10 (0.122) | 1.30 (0.051) | 4.40 (0.173) |
| W | 2312 | 6032-15 | 6.00 (0.236) | 3.20 (0.126) | 1.50 (0.059) max | 2.20 (0.087) | 1.30 (0.051) | 2.90 (0.114) |
| X | 2917 | 7343-15 | 7.30 (0.287) | 4.30 (0.169) | 1.50 (0.059) max | 2.40 (0.094) | 1.30 (0.051) | 4.40 (0.173) |
| Y | 2917 | 7343-20 | 7.30 (0.287) | 4.30 (0.169) | 2.00 (0.079) max | 2.40 (0.094) | 1.30 (0.051) | 4.40 (0.173) |
| 5 | 2917 | 7343-40 | 7.30 (0.287) | 4.30 (0.169) | 3.80 (0.150) | 2.40 (0.094) | 1.30 (0.051) | 4.40 (0.173) |

$W_1$ dimension applies to the termination width for A dimensional area only.

### HOW TO ORDER

| TCJ | A | 226 | M | 004 | R | 0300 | E |
|---|---|---|---|---|---|---|---|
| Type | Case Size<br>See table above | Capacitance Code<br>pF code: 1st two digits represent significant figures, 3rd digit represents multiplier (number of zeros to follow) | Tolerance<br>M = ±20% | **Rated DC Voltage**<br>002 = 2.5Vdc<br>004 = 4Vdc<br>006 = 6.3Vdc<br>010 = 10Vdc<br>016 = 16Vdc<br>020 = 20Vdc<br>025 = 25Vdc<br>035 = 35Vdc<br>050 = 50Vdc<br>063 = 63Vdc<br>075 = 75Vdc<br>100 = 100Vdc<br>125 = 125Vdc | **Packaging**<br>R = Pure Tin 7" Reel<br>S = Pure Tin 13" Reel | ESR in mΩ | Additional Character<br>E = Black resin<br>(It is possible to order PN without "E" as identical product) |

### TECHNICAL SPECIFICATIONS (COMMON FOR ALL TCJ SERIES)

| | |
|---|---|
| Technical Data: | All technical data relate to an ambient temperature of +25°C |
| Capacitance Tolerance: | ±20% |
| Leakage Current DCL: | 0.1CV |
| Resistance to soldering heat: | 3x reflow cycles according to J-STD-020 |

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

The Important Information/Disclaimer is incorporated in the catalog where these specifications came from or available online at www.kyocera-avx.com/disclaimer/ by reference and should be reviewed in full before placing any order.

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

| Cap | | Rated Voltage DC ($V_R$) to 85°C | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| µF | Code | 2.5V (e) | 4V (G) | 6.3V (J) | 10V (A) | 16V (C) | 20V (D) | 25V (E) | 35V (V) | 50V (T) | 63V (J) | 75V (P) | 100V (A) | 125V (B) |
| 0.47 | 474 | | | | | | | | | | B(400) | | | |
| 0.68 | 684 | | | | | | | | | B(400) | B(300) | | | |
| 1.0 | 105 | | | | | | | 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) | B(300)<br>C(300) | C(200) | | | |
| 3.3 | 335 | | | | | | | | A(500)<br>B(200) | B(300)<br>C(200) | C(200) | | | D(250) |
| 4.7 | 475 | | | | K(300,500)<br>R(500) | | | A(500)<br>B(100,150) | B(150,200)<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),<br>B(150) | A(150)<br>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)<br>B(100,150) | A(150)<br>B(90,100,150) | B(150,200)<br>C(200)<br>Y(70) | D(90,120)<br>E(70,100) | E(100,150) | | | |
| 15 | 156 | | A(300) | A(300) | A(200)<br>B(100,200) | A(250),<br>B(90,150) | B(90,150) | B(100,150)<br>Y(90) | B(200)<br>C(200)<br>D(70,100)<br>Y(70,100) | D(150)<br>E(70,100) | E(150) | | | |
| 22 | 226 | | A(300) | A(300), B(70), K(400)<br>S(400),T(150) | A(250),<br>B(70,300)<br>T(70,150) | A(300)<br>B(70,150) | B(90,150)<br>X(100)<br>Y(70) | B(100,150)<br>C(100)<br>D(60,100)<br>X(100), Y(70) | D(70,100)<br>Y(150) | D(90),<br>E(75),<br>E(150) | | | | |
| 33 | 336 | | A(300) | A(200)<br>B(70,200)<br>T(150) | A(250),<br>B(70,200)<br>C(100)<br>T(70,150) | A(200),B(90,150)<br>H(150)<br>Y(45,60,70) | X(100)<br>Y(70) | D(60,100)<br>X(70,100)<br>Y(40,60,70,100) | D(70,100)<br>E(55,70)<br>U(70)<br>Y(100) | | | | | |
| 47 | 476 | | A(200)<br>T(80) | A(70,100,200)<br>B(55,70)<br>T(55,70,80,120) | B(70)<br>C(100)<br>H(100) | D(45,70),<br>H(150)<br>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)<br>U(70)<br>Y(100) | | | | | |
| 68 | 686 | A(250) | A(250)<br>B(70)<br>T(80) | B(55,70)<br>C(55,100), H(100)<br>T(200), W(70) | D(45,55)<br>Y(45,55) | D(50)<br>Y(50) | D(55)<br>E(45)<br>Y(50) | D(70)<br>E(50)<br>Y(100) | | | | | | |
| 100 | 107 | A(200)<br>B(55,70) | A(200)<br>B(40,70)<br>T(70,150) | A(100,150)<br>B(40,45,55,70)<br>C(70,100)<br>T(200), W(70) | D(18,25,45,55,80)<br>Y(18,25,45,55) | D(50)<br>E(40)<br>Y(50) | C(70)<br>D(55)<br>E(45)<br>Y(55) | D(55,70)<br>E(40,60,80)<br>U(70) | | | | | | |
| 150 | 157 | B(70) | B(70)<br>D(15)<br>Y(15,25,45) | B(35,45,55,70)<br>D(12,15,25,40)<br>H(70,200),W(70)<br>Y(15,25,40) | D(25,40,45,55)<br>Y(25,40,45,55) | C(70)<br>D(40,50,70)<br>E(25,40)<br>Y(40,50,70) | E(50) | U(70) | U(100) | | | | | |
| 220 | 227 | B(35,45,70) | B(35,45,60,70)<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(15,18,25,35,40,50) | D(15,25,40,50)<br>Y(15,25,40,50) | D(35,50)<br>E(50) | U(70) | | | | | | | |
| 330 | 337 | B(35,45,70,Y)<br>(25,40) | D(15,25,40,50)<br>Y(15,25,40,50) | D(12,15,18,25,40,50)<br>Y(15,25,40,50) | D(25)<br>5(35,100) | E(35, 50,70),<br>U(50,70),<br>5(100) | | | | | | | | |
| 470 | 477 | D(12,15,25,40,50)<br>Y(15,25,40,50) | D(12,15,25,40,50)<br>Y(15,25,40,50) | D(25,45)<br>E(25)<br>X(35,50,100) | E(25) | 5(100) | | | | | | | | |
| 680 | 687 | | | E(25) | | | | | | | | | | |

Released ratings, (ESR ratings in mOhms in parentheses)
Engineering samples - please contact KYOCERA AVX
Note: Voltage ratings are minimum values. KYOCERA AVX reserves the right to supply higher voltage ratings in the same case size, to the same reliability standards.



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### RATINGS & PART NUMBER REFERENCE

| Part Number | 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 | | |
| **2.5 Volt** | | | | | | | | | | | | | |
| TCJA686M002#0250E | A | 68 | 2.5 | 105 | 17 | 6 | 250 | 600 | 400 | 300 | – | 3 | 3 |
| TCJA107M002#0200E | A | 100 | 2.5 | 105 | 25 | 6 | 200 | 700 | 500 | 300 | – | 3 | 3 |
| TCJB107M002#0055E | B | 100 | 2.5 | 125 | 25 | 6 | 55 | 1500 | 1100 | 700 | 400 | 0 | 3 |
| TCJB107M002#0070E | B | 100 | 2.5 | 125 | 25 | 6 | 70 | 1300 | 900 | 600 | 300 | 1 | 3 |
| TCJB157M002#0070E | B | 150 | 2.5 | 105 | 37.5 | 6 | 70 | 1300 | 900 | 600 | – | 3 | 3 |
| TCJB227M002#0035E | B | 220 | 2.5 | 105 | 55 | 8 | 35 | 1900 | 1300 | 900 | – | 3 | 3 |
| TCJB227M002#0045E | B | 220 | 2.5 | 105 | 55 | 8 | 45 | 1700 | 1200 | 800 | – | 3 | 3 |
| TCJB227M002#0070E | B | 220 | 2.5 | 105 | 55 | 8 | 70 | 1300 | 900 | 600 | – | 3 | 3 |
| TCJB337M002#0035E | B | 330 | 2.5 | 105 | 82.5 | 8 | 35 | 1900 | 1300 | 900 | – | 3 | 3 |
| TCJB337M002#0045E | B | 330 | 2.5 | 105 | 82.5 | 8 | 45 | 1700 | 1200 | 800 | – | 3 | 3 |
| TCJB337M002#0070E | B | 330 | 2.5 | 105 | 82.5 | 8 | 70 | 1300 | 900 | 600 | – | 3 | 3 |
| TCJY337M002#0025E | Y | 330 | 2.5 | 105 | 82.5 | 6 | 25 | 2700 | 1900 | 1200 | – | 2 | 3 |
| TCJY337M002#0040E | Y | 330 | 2.5 | 105 | 82.5 | 6 | 40 | 2200 | 1500 | 1000 | – | 3 | 3 |
| TCJD477M002#0012E | D | 470 | 2.5 | 105 | 117.5 | 6 | 12 | 4300 | 3000 | 1900 | – | 2 | 3 |
| TCJD477M002#0015E | D | 470 | 2.5 | 105 | 117.5 | 6 | 15 | 3900 | 2700 | 1800 | – | 2 | 3 |
| TCJD477M002#0025E | D | 470 | 2.5 | 105 | 117.5 | 6 | 25 | 3000 | 2100 | 1400 | – | 2 | 3 |
| TCJD477M002#0040E | D | 470 | 2.5 | 105 | 117.5 | 6 | 40 | 2400 | 1700 | 1100 | – | 3 | 3 |
| TCJD477M002#0050E | D | 470 | 2.5 | 105 | 117.5 | 6 | 50 | 2100 | 1500 | 900 | – | 3 | 3 |
| TCJY477M002#0015E | Y | 470 | 2.5 | 85 | 117.5 | 6 | 15 | 3500 | 2500 | – | – | 5 | 3 |
| TCJY477M002#0025E | Y | 470 | 2.5 | 105 | 117.5 | 6 | 25 | 2700 | 1900 | 1200 | – | 3 | 3 |
| TCJY477M002#0040E | Y | 470 | 2.5 | 105 | 117.5 | 6 | 40 | 2200 | 1500 | 1000 | – | 3 | 3 |
| TCJY477M002#0050E | Y | 470 | 2.5 | 105 | 117.5 | 6 | 50 | 1900 | 1300 | 900 | – | 3 | 3 |
| **4 Volt** | | | | | | | | | | | | | |
| TCJA156M004#0300E | A | 15 | 4 | 125 | 6 | 6 | 300 | 600 | 400 | 300 | 200 | 1 | 3 |
| TCJA226M004#0300E | A | 22 | 4 | 125 | 8.8 | 6 | 300 | 600 | 400 | 300 | 200 | 1 | 3 |
| TCJA336M004#0300E | A | 33 | 4 | 125 | 13.2 | 6 | 300 | 600 | 400 | 300 | 200 | 1 | 3 |
| TCJA476M004#0200E | A | 47 | 4 | 105 | 18.8 | 6 | 200 | 700 | 500 | 300 | – | 3 | 3 |
| TCJT476M004#0080E | T | 47 | 4 | 105 | 18.8 | 8 | 80 | 1100 | 800 | 500 | – | 3 | 3 |
| TCJA686M004#0250E | A | 68 | 4 | 105 | 27.2 | 6 | 250 | 600 | 400 | 300 | – | 3 | 3 |
| TCJB686M004#0070E | B | 68 | 4 | 125 | 27.2 | 6 | 70 | 1300 | 900 | 600 | 300 | 1 | 3 |
| TCJT686M004#0080E | T | 68 | 4 | 105 | 27.2 | 8 | 80 | 1100 | 800 | 500 | – | 3 | 3 |
| TCJA107M004#0200E | A | 100 | 4 | 105 | 40 | 6 | 200 | 700 | 500 | 300 | – | 3 | 3 |
| TCJB107M004#0040E | B | 100 | 4 | 105 | 40 | 8 | 40 | 1800 | 1300 | 800 | – | 3 | 3 |
| TCJB107M004#0070E | B | 100 | 4 | 125 | 40 | 8 | 70 | 1300 | 900 | 600 | 300 | 0 | 3 |
| TCJT107M004#0070E | T | 100 | 4 | 105 | 40 | 8 | 70 | 1200 | 800 | 500 | – | 3 | 3 |
| TCJT107M004#0150E | T | 100 | 4 | 105 | 40 | 8 | 150 | 800 | 600 | 400 | – | 3 | 3 |
| TCJB157M004#0070E | B | 150 | 4 | 105 | 60 | 6 | 70 | 1300 | 900 | 600 | – | 3 | 3 |
| TCJD157M004#0015E | D | 150 | 4 | 105 | 60 | 6 | 15 | 3900 | 2700 | 1800 | – | 2 | 3 |
| TCJY157M004#0015E | Y | 150 | 4 | 105 | 60 | 6 | 15 | 3500 | 2500 | 1600 | – | 2 | 3 |
| TCJY157M004#0025E | Y | 150 | 4 | 105 | 60 | 6 | 25 | 2700 | 1900 | 1200 | – | 2 | 3 |
| TCJY157M004#0045E | Y | 150 | 4 | 105 | 60 | 6 | 45 | 2000 | 1400 | 900 | – | 3 | 3 |
| TCJB227M004#0035E | B | 220 | 4 | 105 | 88 | 10 | 35 | 1900 | 1300 | 900 | – | 3 | 3 |
| TCJB227M004#0045E | B | 220 | 4 | 105 | 88 | 10 | 45 | 1700 | 1200 | 800 | – | 3 | 3 |
| TCJB227M004#0060E | B | 220 | 4 | 105 | 88 | 10 | 60 | 1400 | 1000 | 600 | – | 3 | 3 |
| TCJB227M004#0070E | B | 220 | 4 | 105 | 88 | 10 | 70 | 1300 | 900 | 600 | – | 3 | 3 |
| TCJD227M004#0012E | D | 220 | 4 | 105 | 88 | 6 | 12 | 4300 | 3000 | 1900 | – | 2 | 3 |
| TCJD227M004#0015E | D | 220 | 4 | 105 | 88 | 6 | 15 | 3900 | 2700 | 1800 | – | 2 | 3 |
| TCJD227M004#0025E | D | 220 | 4 | 105 | 88 | 6 | 25 | 3000 | 2100 | 1400 | – | 2 | 3 |
| TCJD227M004#0040E | D | 220 | 4 | 105 | 88 | 6 | 40 | 2400 | 1700 | 1100 | – | 2 | 3 |
| TCJY227M004#0015E | Y | 220 | 4 | 105 | 88 | 6 | 15 | 3500 | 2500 | 1600 | – | 2 | 3 |
| TCJY227M004#0025E | Y | 220 | 4 | 105 | 88 | 6 | 25 | 2700 | 1900 | 1200 | – | 2 | 3 |
| TCJY227M004#0040E | Y | 220 | 4 | 105 | 88 | 6 | 40 | 2200 | 1500 | 1000 | – | 3 | 3 |
| TCJD337M004#0015E | D | 330 | 4 | 105 | 132 | 6 | 15 | 3900 | 2700 | 1800 | – | 2 | 3 |
| TCJD337M004#0025E | D | 330 | 4 | 105 | 132 | 6 | 25 | 3000 | 2100 | 1400 | – | 2 | 3 |
| TCJD337M004#0040E | D | 330 | 4 | 105 | 132 | 6 | 40 | 2400 | 1700 | 1100 | – | 3 | 3 |
| TCJD337M004#0050E | D | 330 | 4 | 105 | 132 | 6 | 50 | 2100 | 1500 | 900 | – | 3 | 3 |
| TCJY337M004#0015E | Y | 330 | 4 | 85 | 132 | 6 | 15 | 3500 | 2500 | – | – | 5 | 3 |
| TCJY337M004#0025E | Y | 330 | 4 | 105 | 132 | 6 | 25 | 2700 | 1900 | 1200 | – | 3 | 3 |
| TCJY337M004#0040E | Y | 330 | 4 | 105 | 132 | 6 | 40 | 2200 | 1500 | 1000 | – | 3 | 3 |
| TCJY337M004#0050E | Y | 330 | 4 | 105 | 132 | 6 | 50 | 1900 | 1300 | 900 | – | 3 | 3 |
| TCJD477M004#0012E | D | 470 | 4 | 105 | 188 | 6 | 12 | 4300 | 3000 | 1900 | – | 2 | 3 |
| TCJD477M004#0015E | D | 470 | 4 | 105 | 188 | 6 | 15 | 3900 | 2700 | 1800 | – | 2 | 3 |
| TCJD477M004#0025E | D | 470 | 4 | 105 | 188 | 6 | 25 | 3000 | 2100 | 1400 | – | 2 | 3 |
| TCJD477M004#0040E | D | 470 | 4 | 105 | 188 | 6 | 40 | 2400 | 1700 | 1100 | – | 2 | 3 |
| TCJD477M004#0050E | D | 470 | 4 | 105 | 188 | 6 | 50 | 2100 | 1500 | 900 | – | 2 | 3 |
| TCJY477M004#0015E | Y | 470 | 4 | 85 | 188 | 6 | 15 | 3500 | 2500 | – | – | 5 | 3 |
| TCJY477M004#0025E | Y | 470 | 4 | 105 | 188 | 6 | 25 | 2700 | 1900 | 1200 | – | 3 | 3 |
| TCJY477M004#0040E | Y | 470 | 4 | 105 | 188 | 6 | 40 | 2200 | 1500 | 1000 | – | 3 | 3 |
| TCJY477M004#0050E | Y | 470 | 4 | 105 | 188 | 6 | 50 | 1900 | 1300 | 900 | – | 3 | 3 |

### RATINGS & PART NUMBER REFERENCE

| Part Number | 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 | | |
| **6.3 Volt** | | | | | | | | | | | | | |
| TCJA106M006#0300E | A | 10 | 6.3 | 125 | 6 | 6 | 300 | 600 | 400 | 300 | 200 | 1 | 3 |
| TCJN106M006#0200E | N | 10 | 6.3 | 125 | 6 | 6 | 200 | 200 | 600 | 300 | – | 3 | 3 |
| TCJN106M006#0250E | N | 10 | 6.3 | 125 | 6 | 6 | 250 | 250 | 600 | 300 | – | 3 | 3 |
| TCJN106M006#0500E | N | 10 | 6.3 | 125 | 6 | 6 | 500 | 500 | 400 | 200 | – | 3 | 3 |
| TCJR106M006#0500E | R | 10 | 6.3 | 125 | 6 | 6 | 500 | 500 | 400 | 200 | – | 3 | 3 |
| TCJA156M006#0300E | A | 15 | 6.3 | 125 | 9 | 6 | 300 | 600 | 400 | 300 | 200 | 1 | 3 |
| TCJA226M006#0300E | A | 22 | 6.3 | 125 | 13.2 | 6 | 300 | 600 | 400 | 300 | 200 | 1 | 3 |
| TCJB226M006#0070E | B | 22 | 6.3 | 125 | 13.2 | 6 | 70 | 1300 | 900 | 600 | 300 | 0 | 3 |
| TCJK226M006#0400E | K | 22 | 6.3 | 105 | 13.2 | 8 | 400 | 500 | 400 | 200 | – | 3 | 3 |
| TCJS226M006#0400E | S | 22 | 6.3 | 105 | 13.2 | 8 | 400 | 500 | 400 | 200 | – | 3 | 3 |
| TCJT226M006#0150E | T | 22 | 6.3 | 105 | 13.2 | 6 | 150 | 800 | 600 | 400 | – | 3 | 3 |
| TCJA336M006#0200E | A | 33 | 6.3 | 105 | 19.8 | 6 | 200 | 700 | 500 | 300 | – | 3 | 3 |
| TCJB336M006#0070E | B | 33 | 6.3 | 125 | 19.8 | 6 | 70 | 1300 | 900 | 600 | 300 | 0 | 3 |
| TCJB336M006#0200E | B | 33 | 6.3 | 125 | 19.8 | 6 | 200 | 800 | 600 | 400 | 200 | 0 | 3 |
| TCJT336M006#0150E | T | 33 | 6.3 | 105 | 19.8 | 8 | 150 | 800 | 600 | 400 | – | 3 | 3 |
| TCJA476M006#0070E | A | 47 | 6.3 | 105 | 28.2 | 6 | 70 | 1200 | 800 | 500 | – | 3 | 3 |
| TCJA476M006#0100E | A | 47 | 6.3 | 105 | 28.2 | 6 | 100 | 1000 | 700 | 500 | – | 3 | 3 |
| TCJA476M006#0200E | A | 47 | 6.3 | 105 | 28.2 | 6 | 200 | 700 | 500 | 300 | – | 3 | 3 |
| TCJB476M006#0055E | B | 47 | 6.3 | 105 | 28.2 | 6 | 55 | 1500 | 1100 | 700 | – | 2 | 3 |
| TCJB476M006#0070E | B | 47 | 6.3 | 125 | 28.2 | 6 | 70 | 1300 | 900 | 600 | 300 | 1 | 3 |
| TCJT476M006#0055E | T | 47 | 6.3 | 105 | 28.2 | 8 | 55 | 1300 | 900 | 600 | – | 3 | 3 |
| TCJT476M006#0070E | T | 47 | 6.3 | 105 | 28.2 | 8 | 70 | 1200 | 800 | 500 | – | 3 | 3 |
| TCJT476M006#0080E | T | 47 | 6.3 | 105 | 28.2 | 8 | 80 | 1100 | 800 | 500 | – | 3 | 3 |
| TCJT476M006#0120E | T | 47 | 6.3 | 105 | 28.2 | 8 | 120 | 900 | 600 | 400 | – | 3 | 3 |
| TCJB686M006#0055E | B | 68 | 6.3 | 125 | 40.8 | 8 | 55 | 1500 | 1100 | 700 | 400 | 1 | 3 |
| TCJB686M006#0070E | B | 68 | 6.3 | 125 | 40.8 | 8 | 70 | 1300 | 900 | 600 | 300 | 1 | 3 |
| TCJC686M006#0055E | C | 68 | 6.3 | 125 | 40.8 | 6 | 55 | 1800 | 1300 | 800 | 500 | 1 | 3 |
| TCJC686M006#0100E | C | 68 | 6.3 | 125 | 40.8 | 6 | 100 | 1300 | 900 | 600 | 300 | 1 | 3 |
| TCJH686M006#0100E | H | 68 | 6.3 | 105 | 40.8 | 6 | 100 | 1000 | 700 | 500 | – | 3 | 3 |
| TCJT686M006#0200E | T | 68 | 6.3 | 105 | 40.8 | 8 | 200 | 700 | 500 | 300 | – | 3 | 3 |
| TCJW686M006#0070E | W | 68 | 6.3 | 125 | 40.8 | 8 | 70 | 1400 | 1000 | 600 | 400 | 1 | 3 |
| TCJA107M006#0100E | A | 100 | 6.3 | 105 | 60 | 10 | 100 | 1000 | 700 | 500 | – | 3 | 3 |
| TCJA107M006#0150E | A | 100 | 6.3 | 105 | 60 | 10 | 150 | 800 | 600 | 400 | – | 3 | 3 |
| TCJB107M006#0040E | B | 100 | 6.3 | 105 | 60 | 10 | 40 | 1800 | 1300 | 800 | – | 3 | 3 |
| TCJB107M006#0045E | B | 100 | 6.3 | 105 | 60 | 10 | 45 | 1700 | 1200 | 800 | – | 3 | 3 |
| TCJB107M006#0055E | B | 100 | 6.3 | 105 | 60 | 10 | 55 | 1500 | 1100 | 700 | – | 3 | 3 |
| TCJB107M006#0070E | B | 100 | 6.3 | 105 | 60 | 10 | 70 | 1300 | 900 | 600 | – | 3 | 3 |
| TCJC107M006#0070E | C | 100 | 6.3 | 105 | 60 | 6 | 70 | 1600 | 1100 | 700 | – | 3 | 3 |
| TCJC107M006#0100E | C | 100 | 6.3 | 105 | 60 | 6 | 100 | 1300 | 900 | 600 | – | 3 | 3 |
| TCJT107M006#0200E | T | 100 | 6.3 | 105 | 60 | 10 | 200 | 700 | 500 | 300 | – | 3 | 3 |
| TCJW107M006#0070E | W | 100 | 6.3 | 105 | 60 | 6 | 70 | 1400 | 1000 | 600 | – | 3 | 3 |
| TCJB157M006#0035E | B | 150 | 6.3 | 105 | 90 | 10 | 35 | 1900 | 1300 | 900 | – | 3 | 3 |
| TCJB157M006#0045E | B | 150 | 6.3 | 105 | 90 | 10 | 45 | 1700 | 1200 | 800 | – | 3 | 3 |
| TCJB157M006#0055E | B | 150 | 6.3 | 105 | 90 | 10 | 55 | 1500 | 1100 | 700 | – | 3 | 3 |
| TCJB157M006#0070E | B | 150 | 6.3 | 105 | 90 | 10 | 70 | 1300 | 900 | 600 | – | 3 | 3 |
| TCJD157M006#0012E | D | 150 | 6.3 | 105 | 90 | 6 | 12 | 4300 | 3000 | 1900 | – | 2 | 3 |
| TCJD157M006#0015E | D | 150 | 6.3 | 105 | 90 | 6 | 15 | 3900 | 2700 | 1800 | – | 2 | 3 |
| TCJD157M006#0025E | D | 150 | 6.3 | 105 | 90 | 6 | 25 | 3000 | 2100 | 1400 | – | 2 | 3 |
| TCJD157M006#0040E | D | 150 | 6.3 | 105 | 90 | 6 | 40 | 2400 | 1700 | 1100 | – | 2 | 3 |
| TCJH157M006#0070E | H | 150 | 6.3 | 105 | 90 | 6 | 70 | 1200 | 800 | 500 | - | 3 | 3 |
| TCJH157M006#0200E | H | 150 | 6.3 | 105 | 90 | 6 | 200 | 700 | 500 | 300 | – | 3 | 3 |
| TCJW157M006#0070E | W | 150 | 6.3 | 105 | 90 | 6 | 70 | 1400 | 1000 | 600 | – | 3 | 3 |
| TCJY157M006#0015E | Y | 150 | 6.3 | 105 | 90 | 6 | 15 | 3500 | 2500 | 1600 | – | 2 | 3 |
| TCJY157M006#0025E | Y | 150 | 6.3 | 105 | 90 | 6 | 25 | 2700 | 1900 | 1200 | – | 2 | 3 |
| TCJY157M006#0040E | Y | 150 | 6.3 | 105 | 90 | 6 | 40 | 2200 | 1500 | 1000 | – | 3 | 3 |
| TCJB227M006#0070E | B | 220 | 6.3 | 105 | 132 | 10 | 70 | 1300 | 900 | 600 | – | 3 | 3 |
| TCJB227M006#0200E | B | 220 | 6.3 | 105 | 132 | 10 | 200 | 800 | 600 | 400 | – | 3 | 3 |
| TCJD227M006#0012E | D | 220 | 6.3 | 105 | 132 | 6 | 12 | 4300 | 3000 | 1900 | – | 2 | 3 |
| TCJD227M006#0015E | D | 220 | 6.3 | 105 | 132 | 6 | 15 | 3900 | 2700 | 1800 | – | 2 | 3 |
| TCJD227M006#0025E | D | 220 | 6.3 | 105 | 132 | 6 | 25 | 3000 | 2100 | 1400 | – | 2 | 3 |
| TCJD227M006#0035E | D | 220 | 6.3 | 105 | 132 | 6 | 35 | 2500 | 1800 | 1100 | – | 3 | 3 |
| TCJD227M006#0040E | D | 220 | 6.3 | 105 | 132 | 6 | 40 | 2400 | 1700 | 1100 | – | 3 | 3 |
| TCJD227M006#0050E | D | 220 | 6.3 | 105 | 132 | 6 | 50 | 2100 | 1500 | 900 | – | 3 | 3 |
| TCJH227M006#0170E | H | 220 | 6.3 | 105 | 132 | 10 | 170 | 800 | 600 | 400 | – | 3 | 3 |
| TCJY227M006#0015E | Y | 220 | 6.3 | 85 | 132 | 6 | 15 | 3500 | 2500 | – | – | 5 | 3 |
| TCJY227M006#0018E | Y | 220 | 6.3 | 105 | 132 | 6 | 18 | 3200 | 2200 | 1400 | – | 3 | 3 |
| TCJY227M006#0025E | Y | 220 | 6.3 | 105 | 132 | 6 | 25 | 2700 | 1900 | 1200 | – | 2 | 3 |
| TCJY227M006#0035E | Y | 220 | 6.3 | 105 | 132 | 6 | 35 | 2300 | 1600 | 1000 | – | 2 | 3 |
| TCJY227M006#0040E | Y | 220 | 6.3 | 105 | 132 | 6 | 40 | 2200 | 1500 | 1000 | – | 2 | 3 |
| TCJY227M006#0050E | Y | 220 | 6.3 | 105 | 132 | 6 | 50 | 1900 | 1300 | 900 | – | 2 | 3 |




The Important Information/Disclaimer is incorporated in the catalog where these specifications came from or available online at www.kyocera-avx.com/disclaimer/ by reference and should be reviewed in full before placing any order.

### RATINGS & PART NUMBER REFERENCE

| Part Number | 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 | | |
| TCJD337M006#0012E | D | 330 | 6.3 | 105 | 198 | 6 | 12 | 4300 | 3000 | 1900 | – | 3 | 3 |
| TCJD337M006#0015E | D | 330 | 6.3 | 105 | 198 | 6 | 15 | 3900 | 2700 | 1800 | – | 3 | 3 |
| TCJD337M006#0018E | D | 330 | 6.3 | 105 | 198 | 6 | 18 | 3500 | 2500 | 1600 | – | 3 | 3 |
| TCJD337M006#0025E | D | 330 | 6.3 | 105 | 198 | 6 | 25 | 3000 | 2100 | 1400 | – | 3 | 3 |
| TCJD337M006#0040E | D | 330 | 6.3 | 105 | 198 | 6 | 40 | 2400 | 1700 | 1100 | – | 2 | 3 |
| TCJD337M006#0050E | D | 330 | 6.3 | 105 | 198 | 6 | 50 | 2100 | 1500 | 900 | – | 2 | 3 |
| TCJY337M006#0015E | Y | 330 | 6.3 | 85 | 198 | 12 | 15 | 3500 | 2500 | – | – | 5 | 3 |
| TCJY337M006#0025E | Y | 330 | 6.3 | 105 | 198 | 10 | 25 | 2700 | 1900 | 1200 | – | 3 | 3 |
| TCJY337M006#0040E | Y | 330 | 6.3 | 105 | 198 | 12 | 40 | 2200 | 1500 | 1000 | – | 3 | 3 |
| TCJY337M006#0050E | Y | 330 | 6.3 | 105 | 198 | 12 | 50 | 1900 | 1300 | 900 | – | 3 | 3 |
| TCJD477M006#0025E | D | 470 | 6.3 | 105 | 282 | 6 | 25 | 3000 | 2100 | 1400 | – | 2 | 3 |
| TCJD477M006#0045E | D | 470 | 6.3 | 105 | 282 | 6 | 45 | 2200 | 1500 | 1000 | - | 2 | 3 |
| TCJE477M006#0025E | E | 470 | 6.3 | 125 | 296.1 | 10 | 25 | 3200 | 2200 | 1400 | 800 | 0 | 3 |
| TCJX477M006#0035E | X | 470 | 6.3 | 105 | 282 | 6 | 35 | 2200 | 1500 | 1000 | – | 3 | 3 |
| TCJX477M006#0050E | X | 470 | 6.3 | 105 | 282 | 6 | 50 | 1900 | 1300 | 900 | – | 3 | 3 |
| TCJX477M006#0100E | X | 470 | 6.3 | 105 | 282 | 6 | 100 | 1300 | 900 | 600 | – | 3 | 3 |
| TCJE687M006#0025E | E | 680 | 6.3 | 125 | 428.4 | 10 | 25 | 3200 | 2200 | 1400 | 800 | 0 | 3 |
| **10 Volt** | | | | | | | | | | | | | |
| TCJK475M010#0300E | K | 4.7 | 10 | 105 | 4.7 | 6 | 300 | 500 | 400 | 200 | – | 3 | 3 |
| TCJK475M010#0500E | K | 4.7 | 10 | 105 | 4.7 | 6 | 500 | 400 | 300 | 200 | – | 3 | 3 |
| TCJR475M010#0500E | R | 4.7 | 10 | 105 | 4.7 | 6 | 500 | 400 | 300 | 200 | – | 3 | 3 |
| TCJA106M010#0200E | A | 10 | 10 | 125 | 10 | 6 | 200 | 700 | 500 | 300 | 200 | 1 | 3 |
| TCJA106M010#0300E | A | 10 | 10 | 125 | 10 | 6 | 300 | 600 | 400 | 300 | 200 | 1 | 3 |
| TCJA156M010#0200E | A | 15 | 10 | 125 | 15 | 6 | 200 | 700 | 500 | 300 | 200 | 1 | 3 |
| TCJB156M010#0100E | B | 15 | 10 | 125 | 15 | 6 | 100 | 1100 | 800 | 500 | 300 | 0 | 3 |
| TCJB156M010#0200E | B | 15 | 10 | 125 | 15 | 6 | 200 | 800 | 600 | 400 | 200 | 0 | 3 |
| TCJA226M010#0250E | A | 22 | 10 | 125 | 22 | 8 | 250 | 600 | 400 | 300 | 200 | 1 | 3 |
| TCJB226M010#0070E | B | 22 | 10 | 125 | 22 | 6 | 70 | 1300 | 900 | 600 | 300 | 0 | 3 |
| TCJB226M010#0300E | B | 22 | 10 | 125 | 22 | 6 | 300 | 600 | 400 | 300 | 200 | 0 | 3 |
| TCJT226M010#0070E | T | 22 | 10 | 105 | 22 | 6 | 70 | 1200 | 800 | 500 | – | 3 | 3 |
| TCJT226M010#0150E | T | 22 | 10 | 105 | 22 | 6 | 150 | 800 | 600 | 400 | – | 3 | 3 |
| TCJA336M010#0250E | A | 33 | 10 | 125 | 33 | 8 | 250 | 600 | 400 | 300 | 200 | 1 | 3 |
| TCJB336M010#0070E | B | 33 | 10 | 125 | 33 | 6 | 70 | 1300 | 900 | 600 | 300 | 0 | 3 |
| TCJB336M010#0200E | B | 33 | 10 | 125 | 33 | 6 | 200 | 800 | 600 | 400 | 200 | 0 | 3 |
| TCJC336M010#0100E | C | 33 | 10 | 125 | 33 | 6 | 100 | 1300 | 900 | 600 | 300 | 1 | 3 |
| TCJT336M010#0070E | T | 33 | 10 | 105 | 33 | 6 | 70 | 1200 | 800 | 500 | – | 3 | 3 |
| TCJT336M010#0150E | T | 33 | 10 | 105 | 33 | 6 | 150 | 800 | 600 | 400 | – | 3 | 3 |
| TCJB476M010#0070E | B | 47 | 10 | 105 | 47 | 6 | 70 | 1300 | 900 | 600 | – | 3 | 3 |
| TCJC476M010#0100E | C | 47 | 10 | 125 | 47 | 6 | 100 | 1300 | 900 | 600 | 300 | 1 | 3 |
| TCJH476M010#0100E | H | 47 | 10 | 105 | 47 | 6 | 100 | 1000 | 700 | 500 | – | 3 | 3 |
| TCJD686M010#0045E | D | 68 | 10 | 125 | 68 | 6 | 45 | 2200 | 1500 | 1000 | 600 | 0 | 3 |
| TCJD686M010#0055E | D | 68 | 10 | 125 | 68 | 6 | 55 | 2000 | 1400 | 900 | 500 | 0 | 3 |
| TCJY686M010#0045E | Y | 68 | 10 | 105 | 68 | 6 | 45 | 2000 | 1400 | 900 | – | 3 | 3 |
| TCJY686M010#0055E | Y | 68 | 10 | 105 | 68 | 6 | 55 | 1800 | 1300 | 800 | – | 3 | 3 |
| TCJD107M010#0018E | D | 100 | 10 | 105 | 100 | 6 | 18 | 3500 | 2500 | 1600 | – | 2 | 3 |
| TCJD107M010#0025E | D | 100 | 10 | 105 | 100 | 6 | 25 | 3000 | 2100 | 1400 | – | 2 | 3 |
| TCJD107M010#0045E | D | 100 | 10 | 105 | 100 | 6 | 45 | 2200 | 1500 | 1000 | – | 3 | 3 |
| TCJD107M010#0055E | D | 100 | 10 | 105 | 100 | 6 | 55 | 2000 | 1400 | 900 | – | 3 | 3 |
| TCJD107M010#0080E | D | 100 | 10 | 105 | 100 | 6 | 80 | 1700 | 1200 | 800 | – | 3 | 3 |
| TCJY107M010#0018E | Y | 100 | 10 | 105 | 100 | 6 | 18 | 3200 | 2200 | 1400 | – | 2 | 3 |
| TCJY107M010#0025E | Y | 100 | 10 | 105 | 100 | 6 | 25 | 2700 | 1900 | 1200 | – | 2 | 3 |
| TCJY107M010#0045E | Y | 100 | 10 | 105 | 100 | 6 | 45 | 2000 | 1400 | 900 | – | 3 | 3 |
| TCJY107M010#0055E | Y | 100 | 10 | 105 | 100 | 6 | 55 | 1800 | 1300 | 800 | – | 3 | 3 |
| TCJD157M010#0025E | D | 150 | 10 | 105 | 150 | 6 | 25 | 3000 | 2100 | 1400 | – | 3 | 3 |
| TCJD157M010#0040E | D | 150 | 10 | 105 | 150 | 6 | 40 | 2400 | 1700 | 1100 | – | 3 | 3 |
| TCJD157M010#0045E | D | 150 | 10 | 105 | 150 | 6 | 45 | 2200 | 1500 | 1000 | – | 3 | 3 |
| TCJD157M010#0055E | D | 150 | 10 | 105 | 150 | 6 | 55 | 2000 | 1400 | 900 | – | 3 | 3 |
| TCJY157M010#0025E | Y | 150 | 10 | 105 | 150 | 6 | 25 | 2700 | 1900 | 1200 | – | 3 | 3 |
| TCJY157M010#0040E | Y | 150 | 10 | 105 | 150 | 6 | 40 | 2200 | 1500 | 1000 | – | 3 | 3 |
| TCJY157M010#0045E | Y | 150 | 10 | 105 | 150 | 6 | 45 | 2000 | 1400 | 900 | – | 3 | 3 |
| TCJY157M010#0055E | Y | 150 | 10 | 105 | 150 | 6 | 55 | 1800 | 1300 | 800 | – | 3 | 3 |
| TCJD227M010#0015E | D | 220 | 10 | 105 | 220 | 6 | 15 | 3900 | 2700 | 1800 | – | 3 | 3 |
| TCJD227M010#0025E | D | 220 | 10 | 105 | 220 | 6 | 25 | 3000 | 2100 | 1400 | – | 3 | 3 |
| TCJD227M010#0040E | D | 220 | 10 | 105 | 220 | 6 | 40 | 2400 | 1700 | 1100 | – | 3 | 3 |
| TCJD227M010#0050E | D | 220 | 10 | 105 | 220 | 6 | 50 | 2100 | 1500 | 900 | – | 3 | 3 |
| TCJY227M010#0015E | Y | 220 | 10 | 85 | 220 | 6 | 15 | 3500 | 2500 | – | – | 5 | 3 |
| TCJY227M010#0025E | Y | 220 | 10 | 105 | 220 | 6 | 25 | 2700 | 1900 | 1200 | – | 3 | 3 |
| TCJY227M010#0040E | Y | 220 | 10 | 105 | 220 | 6 | 40 | 2200 | 1500 | 1000 | – | 3 | 3 |
| TCJY227M010#0050E | Y | 220 | 10 | 105 | 220 | 6 | 50 | 1900 | 1300 | 900 | – | 3 | 3 |
| TCJD337M010#0025E | D | 330 | 10 | 105 | 330 | 6 | 25 | 3000 | 2100 | 1400 | – | 2 | 3 |
| TCJ5337M010#0035E | 5 | 330 | 10 | 105 | 330 | 10 | 35 | 2600 | 1800 | 1200 | – | 2 | 3 |

### RATINGS & PART NUMBER REFERENCE

| Part Number | 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 | | |
| TCJ5337M010#0100E | 5 | 330 | 10 | 105 | 330 | 10 | 100 | 1500 | 1100 | 700 | – | 2 | 3 |
| TCJE477M010#0025E | E | 470 | 10 | 125 | 470 | 10 | 25 | 3200 | 2200 | 1400 | 800 | 0 | 3 |
| **16 Volt** | | | | | | | | | | | | | |
| TCJA685M016#0200E | A | 6.8 | 16 | 125 | 10.9 | 6 | 200 | 700 | 500 | 300 | 200 | 1 | 3 |
| TCJA106M016#0200E | A | 10 | 16 | 125 | 16 | 6 | 200 | 700 | 500 | 300 | 200 | 1 | 3 |
| TCJB106M016#0100E | B | 10 | 16 | 125 | 16 | 6 | 100 | 1100 | 800 | 500 | 300 | 1 | 3 |
| TCJB106M016#0200E | B | 10 | 16 | 125 | 16 | 6 | 200 | 800 | 600 | 400 | 200 | 1 | 3 |
| TCJT106M016#0100E | T | 10 | 16 | 125 | 16 | 6 | 100 | 1000 | 700 | 500 | 300 | 1 | 3 |
| TCJT106M016#0150E | T | 10 | 16 | 125 | 16 | 6 | 150 | 800 | 600 | 400 | 200 | 1 | 3 |
| TCJT106M016#0200E | T | 10 | 16 | 125 | 16 | 6 | 200 | 700 | 500 | 300 | 200 | 1 | 3 |
| TCJA156M016#0250E | A | 15 | 16 | 125 | 24 | 8 | 250 | 600 | 400 | 300 | 200 | 1 | 3 |
| TCJB156M016#0090E | B | 15 | 16 | 125 | 24 | 6 | 90 | 1200 | 800 | 500 | 300 | 0 | 3 |
| TCJB156M016#0150E | B | 15 | 16 | 125 | 24 | 6 | 150 | 900 | 600 | 400 | 200 | 0 | 3 |
| TCJA226M016#0300E | A | 22 | 16 | 105 | 35.2 | 10 | 300 | 600 | 400 | 300 | – | 3 | 3 |
| TCJB226M016#0070E | B | 22 | 16 | 125 | 35.2 | 8 | 70 | 1300 | 900 | 600 | 300 | 0 | 3 |
| TCJB226M016#0150E | B | 22 | 16 | 125 | 35.2 | 6 | 150 | 900 | 600 | 400 | 200 | 0 | 3 |
| TCJA336M016#0200E | A | 33 | 16 | 105 | 52.8 | 10 | 200 | 700 | 500 | 300 | – | 3 | 3 |
| TCJB336M016#0090E | B | 33 | 16 | 125 | 52.8 | 8 | 90 | 1200 | 800 | 500 | 300 | 0 | 3 |
| TCJB336M016#0150E | B | 33 | 16 | 125 | 52.8 | 8 | 150 | 900 | 600 | 400 | 200 | 0 | 3 |
| TCJH336M016#0150E | H | 33 | 16 | 105 | 52.8 | 6 | 150 | 800 | 600 | 400 | – | 3 | 3 |
| TCJY336M016#0045E | Y | 33 | 16 | 105 | 52.8 | 6 | 45 | 2000 | 1400 | 900 | – | 2 | 3 |
| TCJY336M016#0060E | Y | 33 | 16 | 105 | 52.8 | 6 | 60 | 1800 | 1300 | 800 | – | 2 | 3 |
| TCJY336M016#0070E | Y | 33 | 16 | 105 | 52.8 | 6 | 70 | 1600 | 1100 | 700 | – | 2 | 3 |
| TCJD476M016#0045E | D | 47 | 16 | 125 | 75.2 | 6 | 45 | 2200 | 1500 | 1000 | 600 | 0 | 3 |
| TCJD476M016#0070E | D | 47 | 16 | 125 | 75.2 | 6 | 70 | 1800 | 1300 | 800 | 500 | 0 | 3 |
| TCJH476M016#0150E | H | 47 | 16 | 105 | 75.2 | 6 | 150 | 800 | 600 | 400 | – | 3 | 4 |
| TCJX476M016#0045E | X | 47 | 16 | 105 | 75.2 | 6 | 45 | 2000 | 1400 | 900 | – | 2 | 3 |
| TCJX476M016#0070E | X | 47 | 16 | 105 | 75.2 | 6 | 70 | 1600 | 1100 | 700 | – | 2 | 3 |
| TCJY476M016#0045E | Y | 47 | 16 | 105 | 75.2 | 6 | 45 | 2000 | 1400 | 900 | – | 2 | 3 |
| TCJY476M016#0070E | Y | 47 | 16 | 105 | 75.2 | 6 | 70 | 1600 | 1100 | 700 | – | 2 | 3 |
| TCJD686M016#0050E | D | 68 | 16 | 105 | 108.8 | 6 | 50 | 2100 | 1500 | 900 | – | 2 | 3 |
| TCJY686M016#0050E | Y | 68 | 16 | 105 | 108.8 | 6 | 50 | 1900 | 1300 | 900 | – | 2 | 3 |
| TCJD107M016#0050E | D | 100 | 16 | 105 | 160 | 6 | 50 | 2100 | 1500 | 900 | – | 2 | 3 |
| TCJE107M016#0040E | E | 100 | 16 | 105 | 160 | 6 | 40 | 2500 | 1800 | 1100 | – | 2 | 3 |
| TCJY107M016#0050E | Y | 100 | 16 | 105 | 160 | 6 | 50 | 2320 | 2320 | 580 | – | 2 | 3 |
| TCJC157M016#0070E | C | 150 | 16 | 125 | 240 | 10 | 70 | 1600 | 1100 | 700 | 400 | 0 | 3 |
| TCJD157M016#0040E | D | 150 | 16 | 85 | 240 | 6 | 40 | 2400 | 1700 | – | – | 5 | 3 |
| TCJD157M016#0050E | D | 150 | 16 | 85 | 240 | 6 | 50 | 2100 | 1500 | – | – | 5 | 3 |
| TCJD157M016#0070E | D | 150 | 16 | 105 | 240 | 6 | 70 | 1800 | 1300 | 800 | – | 3 | 3 |
| TCJE157M016#0025E | E | 150 | 16 | 125 | 240 | 8 | 25 | 3200 | 2200 | 1400 | 800 | 0 | 3 |
| TCJE157M016#0040E | E | 150 | 16 | 125 | 240 | 10 | 40 | 2500 | 1800 | 1100 | 600 | 0 | 3 |
| TCJY157M016#0040E | Y | 150 | 16 | 105 | 240 | 6 | 40 | 2200 | 1500 | 1000 | – | 3 | 3 |
| TCJY157M016#0050E | Y | 150 | 16 | 105 | 240 | 6 | 50 | 1900 | 1300 | 900 | – | 3 | 3 |
| TCJY157M016#0070E | Y | 150 | 16 | 105 | 240 | 6 | 70 | 1600 | 1100 | 700 | – | 3 | 3 |
| TCJD227M016#0035E | D | 220 | 16 | 105 | 352 | 10 | 35 | 2500 | 1800 | 1100 | – | 2 | 3 |
| TCJD227M016#0050E | D | 220 | 16 | 105 | 352 | 10 | 50 | 2100 | 1500 | 900 | – | 2 | 3 |
| TCJE227M016#0050E | E | 220 | 16 | 125 | 352 | 10 | 50 | 2200 | 1500 | 1000 | 600 | 0 | 3 |
| TCJE337M016#0035E | E | 330 | 16 | 105 | 528 | 10 | 35 | 2700 | 1900 | 1200 | – | 2 | 3 |
| TCJE337M016#0050E | E | 330 | 16 | 105 | 528 | 10 | 50 | 2200 | 1500 | 1000 | – | 2 | 3 |
| TCJE337M016#0070E | E | 330 | 16 | 105 | 528 | 10 | 70 | 1900 | 1300 | 900 | – | 2 | 3 |
| TCJU337M016R0050E | U | 330 | 16 | 125 | 528 | 12 | 50 | 2800 | 2000 | 1300 | 700 | 1 | 3 |
| TCJU337M016R0070E | U | 330 | 16 | 125 | 528 | 12 | 70 | 2300 | 1600 | 1000 | 600 | 1 | 3 |
| TCJ5337M016#0100E | 5 | 330 | 16 | 105 | 528 | 10 | 100 | 1500 | 1100 | 700 | – | 2 | 3 |
| TCJ5477M016R0100E | 5 | 470 | 16 | 105 | 752 | 10 | 100 | 1500 | 1100 | 700 | – | 3 | 3 |
| **20 Volt** | | | | | | | | | | | | | |
| TCJA685M020#0150E | A | 6.8 | 20 | 125 | 13.6 | 6 | 150 | 800 | 600 | 400 | 200 | 1 | 3 |
| TCJB685M020#0150E | B | 6.8 | 20 | 105 | 13.6 | 8 | 150 | 900 | 600 | 400 | – | 3 | 3 |
| TCJA106M020#0150E | A | 10 | 20 | 125 | 20 | 6 | 150 | 800 | 600 | 400 | 200 | 1 | 3 |
| TCJB106M020#0100E | B | 10 | 20 | 125 | 20 | 8 | 100 | 1100 | 800 | 500 | 300 | 0 | 3 |
| TCJB106M020#0150E | B | 10 | 20 | 125 | 20 | 8 | 150 | 900 | 600 | 400 | 200 | 0 | 3 |
| TCJB156M020#0090E | B | 15 | 20 | 125 | 30 | 8 | 90 | 1200 | 800 | 500 | 300 | 0 | 3 |
| TCJB156M020#0150E | B | 15 | 20 | 125 | 30 | 8 | 150 | 900 | 600 | 400 | 200 | 0 | 3 |
| TCJB226M020#0090E | B | 22 | 20 | 105 | 44 | 6 | 90 | 1200 | 800 | 500 | 300 | 0 | 3 |
| TCJB226M020#0150E | B | 22 | 20 | 105 | 44 | 6 | 150 | 900 | 600 | 400 | 200 | 0 | 3 |
| TCJX226M020#0100E | X | 22 | 20 | 105 | 44 | 8 | 100 | 1300 | 900 | 600 | – | 2 | 3 |
| TCJY226M020#0070E | Y | 22 | 20 | 105 | 44 | 6 | 70 | 1600 | 1100 | 700 | – | 2 | 3 |
| TCJX336M020#0100E | X | 33 | 20 | 105 | 66 | 6 | 100 | 1300 | 900 | 600 | – | 2 | 3 |
| TCJY336M020#0070E | Y | 33 | 20 | 105 | 66 | 6 | 70 | 1600 | 1100 | 700 | – | 2 | 3 |
| TCJD476M020#0055E | D | 47 | 20 | 105 | 94 | 6 | 55 | 2000 | 1400 | 900 | – | 2 | 3 |
| TCJX476M020#0055E | X | 47 | 20 | 105 | 94 | 6 | 55 | 1800 | 1300 | 800 | – | 3 | 3 |
| TCJX476M020#0070E | X | 47 | 20 | 105 | 94 | 6 | 70 | 1600 | 1100 | 700 | – | 3 | 3 |

### RATINGS & PART NUMBER REFERENCE

| Part Number | 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 | | |
| TCJY476M020#0070E | Y | 47 | 20 | 125 | 94 | 6 | 70 | 1600 | 1100 | 700 | 400 | 0 | 3 |
| TCJD686M020#0055E | D | 68 | 20 | 105 | 136 | 6 | 55 | 2000 | 1400 | 900 | – | 3 | 3 |
| TCJE686M020#0045E | E | 68 | 20 | 105 | 136 | 6 | 45 | 2400 | 1700 | 1100 | – | 2 | 3 |
| TCJY686M020#0050E | Y | 68 | 20 | 105 | 136 | 6 | 50 | 1900 | 1300 | 900 | – | 2 | 3 |
| TCJC107M020#0070E | C | 100 | 20 | 125 | 200 | 10 | 70 | 1600 | 1100 | 700 | 400 | 0 | 3 |
| TCJD107M020#0055E | D | 100 | 20 | 105 | 200 | 6 | 55 | 2000 | 1400 | 900 | – | 2 | 3 |
| TCJE107M020#0045E | E | 100 | 20 | 125 | 200 | 10 | 45 | 2400 | 1700 | 1100 | 600 | 0 | 3 |
| TCJY107M020#0055E | Y | 100 | 20 | 105 | 200 | 6 | 55 | 1800 | 1300 | 800 | – | 2 | 3 |
| TCJE157M020#0050E | E | 150 | 20 | 125 | 300 | 6 | 50 | 2200 | 1500 | 1000 | 600 | 0 | 3 |
| TCJU227M020R0070E | U | 220 | 20 | 105 | 440 | 12 | 70 | 2300 | 1600 | 1000 | – | 2 | 3 |
| **25 Volt** | | | | | | | | | | | | | |
| TCJP105M025#0500E | P | 1.0 | 25 | 105 | 2.5 | 6 | 500 | 400 | 300 | 200 | – | 2 | 3 |
| TCJA475M025#0500E | A | 4.7 | 25 | 125 | 11.8 | 8 | 500 | 400 | 300 | 200 | 100 | 1 | 3 |
| TCJB475M025#0100E | B | 4.7 | 25 | 105 | 11.8 | 6 | 100 | 1100 | 800 | 500 | – | 3 | 3 |
| TCJB475M025#0150E | B | 4.7 | 25 | 105 | 11.8 | 6 | 150 | 900 | 600 | 400 | – | 3 | 3 |
| TCJA685M025#0150E | A | 6.8 | 25 | 105 | 17 | 6 | 150 | 800 | 600 | 400 | – | 3 | 3 |
| TCJB685M025#0090E | B | 6.8 | 25 | 105 | 17 | 6 | 90 | 1200 | 800 | 500 | – | 2 | 3 |
| TCJB685M025#0150E | B | 6.8 | 25 | 105 | 17 | 6 | 150 | 900 | 600 | 400 | – | 3 | 3 |
| TCJT685M025#0100E | T | 6.8 | 25 | 105 | 17 | 6 | 100 | 1000 | 700 | 500 | – | 3 | 3 |
| TCJT685M025#0150E | T | 6.8 | 25 | 105 | 17 | 6 | 150 | 800 | 600 | 400 | – | 3 | 3 |
| TCJA106M025#0150E | A | 10 | 25 | 105 | 25 | 6 | 150 | 800 | 600 | 400 | – | 2 | 3 |
| TCJB106M025#0090E | B | 10 | 25 | 105 | 25 | 6 | 90 | 1200 | 800 | 500 | – | 2 | 3 |
| TCJB106M025#0100E | B | 10 | 25 | 105 | 25 | 6 | 100 | 1100 | 800 | 500 | – | 2 | 3 |
| TCJB106M025#0150E | B | 10 | 25 | 105 | 25 | 6 | 150 | 900 | 600 | 400 | – | 2 | 3 |
| TCJB156M025#0100E | B | 15 | 25 | 105 | 37.5 | 6 | 100 | 1400 | 1400 | 900 | – | 2 | 3 |
| TCJB156M025#0150E | B | 15 | 25 | 105 | 37.5 | 6 | 150 | 900 | 600 | 400 | – | 2 | 3 |
| TCJY156M025#0090E | Y | 15 | 25 | 105 | 37.5 | 6 | 90 | 1400 | 1000 | 600 | – | 2 | 3 |
| TCJB226M025#0100E | B | 22 | 25 | 105 | 55 | 6 | 100 | 1100 | 800 | 500 | – | 2 | 3 |
| TCJB226M025#0150E | B | 22 | 25 | 105 | 55 | 6 | 150 | 900 | 600 | 400 | – | 2 | 3 |
| TCJC226M025#0100E | C | 22 | 25 | 105 | 55 | 6 | 100 | 1300 | 900 | 600 | – | 3 | 3 |
| TCJD226M025#0060E | D | 22 | 25 | 105 | 55 | 6 | 60 | 1900 | 1300 | 900 | – | 2 | 3 |
| TCJD226M025#0100E | D | 22 | 25 | 105 | 55 | 6 | 100 | 1500 | 1100 | 700 | – | 2 | 3 |
| TCJX226M025#0100E | X | 22 | 25 | 105 | 55 | 8 | 100 | 1300 | 900 | 600 | – | 2 | 3 |
| TCJY226M025#0070E | Y | 22 | 25 | 105 | 55 | 6 | 70 | 1600 | 1100 | 700 | – | 3 | 3 |
| TCJD336M025#0060E | D | 33 | 25 | 105 | 82.5 | 6 | 60 | 1900 | 1300 | 900 | – | 2 | 3 |
| TCJD336M025#0100E | D | 33 | 25 | 105 | 82.5 | 6 | 100 | 1500 | 1100 | 700 | – | 2 | 3 |
| TCJX336M025#0070E | X | 33 | 25 | 105 | 82.5 | 6 | 70 | 1600 | 1100 | 700 | – | 2 | 3 |
| TCJX336M025#0100E | X | 33 | 25 | 105 | 82.5 | 6 | 100 | 1300 | 900 | 600 | – | 2 | 3 |
| TCJY336M025#0040E | Y | 33 | 25 | 105 | 82.5 | 6 | 40 | 2200 | 1500 | 1000 | – | 2 | 3 |
| TCJY336M025#0060E | Y | 33 | 25 | 105 | 82.5 | 6 | 60 | 1800 | 1300 | 800 | – | 2 | 3 |
| TCJY336M025#0070E | Y | 33 | 25 | 105 | 82.5 | 6 | 70 | 1600 | 1100 | 700 | – | 2 | 3 |
| TCJY336M025#0100E | Y | 33 | 25 | 105 | 82.5 | 6 | 100 | 1400 | 1000 | 600 | – | 2 | 3 |
| TCJD476M025#0060E | D | 47 | 25 | 105 | 117.5 | 6 | 60 | 1900 | 1300 | 900 | – | 3 | 3 |
| TCJD476M025#0100E | D | 47 | 25 | 105 | 117.5 | 6 | 100 | 1500 | 1100 | 700 | – | 3 | 3 |
| TCJE476M025#0050E | E | 47 | 25 | 105 | 117.5 | 6 | 50 | 2200 | 1500 | 1000 | – | 3 | 3 |
| TCJY476M025#0100E | Y | 47 | 25 | 105 | 117.5 | 6 | 100 | 1400 | 1000 | 600 | – | 3 | 3 |
| TCJD686M025#0070E | D | 68 | 25 | 105 | 170 | 6 | 70 | 1800 | 1300 | 800 | – | 2 | 3 |
| TCJE686M025#0050E | E | 68 | 25 | 105 | 170 | 6 | 50 | 2200 | 1500 | 1000 | – | 3 | 3 |
| TCJY686M025#0100E | Y | 68 | 25 | 105 | 170 | 6 | 100 | 1400 | 1000 | 600 | – | 3 | 3 |
| TCJD107M025#0055E | D | 100 | 25 | 105 | 250 | 6 | 55 | 2000 | 1400 | 900 | – | 2 | 3 |
| TCJD107M025#0070E | D | 100 | 25 | 105 | 250 | 6 | 70 | 1800 | 1300 | 800 | – | 2 | 3 |
| TCJE107M025#0040E | E | 100 | 25 | 125 | 250 | 6 | 40 | 2500 | 1800 | 1100 | 600 | 0 | 3 |
| TCJE107M025#0060E | E | 100 | 25 | 125 | 250 | 6 | 60 | 2000 | 1400 | 900 | 500 | 0 | 3 |
| TCJE107M025#0080E | E | 100 | 25 | 125 | 250 | 6 | 80 | 1800 | 1300 | 800 | 500 | 0 | 3 |
| TCJU107M025R0070E | U | 100 | 25 | 125 | 250 | 12 | 70 | 2300 | 1600 | 1000 | 600 | 1 | 3 |
| TCJU157M025R0070E | U | 150 | 25 | 105 | 375 | 12 | 70 | 2300 | 1600 | 1000 | – | 2 | 3 |
| **35 Volt** | | | | | | | | | | | | | |
| TCJB155M035#0200E | B | 1.5 | 35 | 105 | 5.3 | 6 | 200 | 800 | 600 | 400 | – | 2 | 3 |
| TCJB225M035#0200E | B | 2.2 | 35 | 105 | 7.7 | 6 | 200 | 800 | 600 | 400 | – | 3 | 3 |
| TCJA335M035#0500E | A | 3.3 | 35 | 125 | 11.6 | 8 | 500 | 400 | 300 | 200 | 100 | 1 | 3 |
| TCJB335M035#0200E | B | 3.3 | 35 | 105 | 11.6 | 6 | 200 | 800 | 600 | 400 | – | 3 | 3 |
| TCJB475M035#0150E | B | 4.7 | 35 | 125 | 16.5 | 6 | 150 | 900 | 600 | 400 | 200 | 0 | 3 |
| TCJB475M035#0200E | B | 4.7 | 35 | 125 | 16.5 | 6 | 200 | 800 | 600 | 400 | 200 | 0 | 3 |
| TCJC475M035#0200E | C | 4.7 | 35 | 105 | 16.5 | 6 | 200 | 900 | 600 | 400 | – | 3 | 3 |
| TCJC685M035#0200E | C | 6.8 | 35 | 105 | 23.8 | 6 | 200 | 900 | 600 | 400 | – | 3 | 3 |
| TCJB106M035#0150E | B | 10 | 35 | 125 | 35 | 6 | 150 | 900 | 600 | 400 | 200 | 0 | 3 |
| TCJB106M035#0200E | B | 10 | 35 | 105 | 35 | 6 | 200 | 800 | 600 | 400 | – | 2 | 3 |
| TCJC106M035#0200E | C | 10 | 35 | 105 | 35 | 6 | 200 | 900 | 600 | 400 | – | 3 | 3 |
| TCJY106M035#0070E | Y | 10 | 35 | 105 | 35 | 6 | 70 | 1600 | 1100 | 700 | – | 2 | 3 |
| TCJB156M035#0200E | B | 15 | 35 | 105 | 52.5 | 6 | 200 | 800 | 600 | 400 | – | 2 | 3 |
| TCJC156M035#0200E | C | 15 | 35 | 105 | 52.5 | 6 | 200 | 900 | 600 | 400 | – | 3 | 3 |

### RATINGS & PART NUMBER REFERENCE

| Part Number | 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 | | |
| TCJD156M035#0070E | D | 15 | 35 | 105 | 52.5 | 6 | 70 | 1800 | 1300 | 800 | – | 3 | 3 |
| TCJD156M035#0100E | D | 15 | 35 | 105 | 52.5 | 6 | 100 | 1500 | 1100 | 700 | – | 3 | 3 |
| TCJY156M035#0070E | Y | 15 | 35 | 105 | 52.5 | 6 | 70 | 1600 | 1100 | 700 | – | 3 | 3 |
| TCJY156M035#0100E | Y | 15 | 35 | 105 | 52.5 | 6 | 100 | 1400 | 1000 | 600 | – | 3 | 3 |
| TCJD226M035#0070E | D | 22 | 35 | 105 | 77 | 6 | 70 | 1800 | 1300 | 800 | – | 2 | 3 |
| TCJD226M035#0100E | D | 22 | 35 | 105 | 77 | 6 | 100 | 1500 | 1100 | 700 | – | 2 | 3 |
| TCJY226M035#0150E | Y | 22 | 35 | 105 | 77 | 6 | 150 | 1100 | 800 | 500 | – | 3 | 3 |
| TCJD336M035#0070E | D | 33 | 35 | 105 | 115.5 | 6 | 70 | 1800 | 1300 | 800 | – | 2 | 3 |
| TCJD336M035#0100E | D | 33 | 35 | 105 | 115.5 | 6 | 100 | 1500 | 1100 | 700 | – | 2 | 3 |
| TCJE336M035#0055E | E | 33 | 35 | 105 | 115.5 | 6 | 55 | 2100 | 1500 | 900 | – | 3 | 3 |
| TCJE336M035#0070E | E | 33 | 35 | 105 | 115.5 | 6 | 70 | 1900 | 1300 | 900 | – | 3 | 3 |
| TCJU336M035R0070E | U | 33 | 35 | 125 | 115.5 | 12 | 70 | 2300 | 1600 | 1000 | 600 | 1 | 3 |
| TCJY336M035#0100E | Y | 33 | 35 | 105 | 115.5 | 6 | 100 | 1400 | 1000 | 600 | – | 3 | 3 |
| TCJE476M035#0055E | E | 47 | 35 | 105 | 164.5 | 6 | 55 | 2100 | 1500 | 900 | – | 2 | 3 |
| TCJU476M035R0070E | U | 47 | 35 | 125 | 164.5 | 12 | 70 | 2300 | 1600 | 1000 | 600 | 1 | 3 |
| TCJY476M035#0100E | Y | 47 | 35 | 105 | 164.5 | 6 | 100 | 1400 | 1000 | 600 | – | 3 | 3 |
| TCJU157M035#0100E | U | 150 | 35 | 105 | 525 | 10 | 100 | 1900 | 1300 | 900 | - | 2 | 3 |
| **50 Volt** | | | | | | | | | | | | | |
| TCJB684M050#0400E | B | 0.68 | 50 | 105 | 3.4 | 6 | 400 | 600 | 400 | 300 | – | 3 | 3 |
| TCJB105M050#0300E | B | 1.0 | 50 | 105 | 5 | 6 | 300 | 600 | 400 | 300 | – | 3 | 3 |
| TCJB155M050#0300E | B | 1.5 | 50 | 105 | 7.5 | 6 | 300 | 600 | 400 | 300 | – | 3 | 3 |
| TCJC155M050#0300E | C | 1.5 | 50 | 105 | 7.5 | 6 | 300 | 800 | 600 | 400 | – | 3 | 3 |
| TCJB225M050#0300E | B | 2.2 | 50 | 125 | 11 | 8 | 300 | 600 | 400 | 300 | 200 | 0 | 3 |
| TCJC225M050#0300E | C | 2.2 | 50 | 105 | 11 | 6 | 300 | 800 | 600 | 400 | – | 3 | 3 |
| TCJB335M050#0300E | B | 3.3 | 50 | 125 | 16.5 | 8 | 300 | 600 | 400 | 300 | 200 | 0 | 3 |
| TCJC335M050#0200E | C | 3.3 | 50 | 105 | 16.5 | 8 | 200 | 900 | 600 | 400 | – | 3 | 3 |
| TCJC475M050#0200E | C | 4.7 | 50 | 105 | 23.5 | 8 | 200 | 900 | 600 | 400 | – | 3 | 3 |
| TCJX475M050#0250E | X | 4.7 | 50 | 105 | 23.5 | 6 | 250 | 800 | 600 | 400 | – | 2 | 5 |
| TCJY475M050#0250E | Y | 4.7 | 50 | 105 | 23.5 | 6 | 250 | 900 | 600 | 400 | – | 2 | 3 |
| TCJC685M050#0200E | C | 6.8 | 50 | 105 | 34 | 8 | 200 | 900 | 600 | 400 | – | 3 | 3 |
| TCJD685M050#0120E | D | 6.8 | 50 | 105 | 34 | 10 | 120 | 1400 | 1000 | 600 | – | 3 | 3 |
| TCJD106M050#0090E | D | 10 | 50 | 105 | 50 | 10 | 90 | 1600 | 1100 | 700 | – | 3 | 3 |
| TCJD106M050#0120E | D | 10 | 50 | 105 | 50 | 10 | 120 | 1400 | 1000 | 600 | – | 3 | 3 |
| TCJE106M050#0070E | E | 10 | 50 | 105 | 50 | 6 | 70 | 1900 | 1300 | 900 | – | 3 | 3 |
| TCJE106M050#0100E | E | 10 | 50 | 105 | 50 | 6 | 100 | 1600 | 1100 | 700 | – | 3 | 3 |
| TCJD156M050#0150E | D | 15 | 50 | 125 | 75 | 8 | 150 | 1200 | 800 | 500 | 300 | 1 | 3 |
| TCJE156M050#0070E | E | 15 | 50 | 105 | 75 | 6 | 70 | 1900 | 1300 | 900 | – | 3 | 3 |
| TCJE156M050#0100E | E | 15 | 50 | 105 | 75 | 6 | 100 | 1600 | 1100 | 700 | – | 3 | 3 |
| TCJD226M050#0090E | D | 22 | 50 | 125 | 110 | 8 | 90 | 1600 | 1100 | 700 | 400 | 1 | 3 |
| TCJE226M050#0075E | E | 22 | 50 | 125 | 110 | 8 | 75 | 1800 | 1300 | 800 | 500 | 1 | 3 |
| TCJE226M050#0150E | E | 22 | 50 | 105 | 110 | 8 | 150 | 1300 | 900 | 600 | – | 2 | 3 |
| **63 Volt** | | | | | | | | | | | | | |
| TCJB474M063#0400E | B | 0.47 | 63 | 105 | 3 | 8 | 400 | 600 | 400 | 300 | – | 3 | 3 |
| TCJB684M063#0300E | B | 0.68 | 63 | 105 | 4.3 | 8 | 300 | 600 | 400 | 300 | – | 3 | 3 |
| TCJB105M063#0300E | B | 1.0 | 63 | 105 | 6.3 | 8 | 300 | 600 | 400 | 300 | – | 3 | 3 |
| TCJC105M063#0300E | C | 1.0 | 63 | 105 | 6.3 | 6 | 300 | 800 | 600 | 400 | – | 3 | 3 |
| TCJC155M063#0300E | C | 1.5 | 63 | 105 | 9.5 | 6 | 300 | 800 | 600 | 400 | – | 3 | 3 |
| TCJC225M063#0200E | C | 2.2 | 63 | 105 | 13.9 | 6 | 200 | 900 | 600 | 400 | – | 3 | 3 |
| TCJC335M063#0200E | C | 3.3 | 63 | 105 | 20.8 | 6 | 200 | 900 | 600 | 400 | – | 3 | 3 |
| TCJC475M063#0200E | C | 4.7 | 63 | 105 | 29.6 | 6 | 200 | 900 | 600 | 400 | – | 3 | 3 |
| TCJD475M063#0120E | D | 4.7 | 63 | 105 | 29.6 | 6 | 120 | 1400 | 1000 | 600 | – | 3 | 3 |
| TCJD685M063#0120E | D | 6.8 | 63 | 105 | 42.8 | 6 | 120 | 1400 | 1000 | 600 | – | 3 | 3 |
| TCJE685M063#0100E | E | 6.8 | 63 | 105 | 42.8 | 6 | 100 | 1600 | 1100 | 700 | – | 3 | 3 |
| TCJE685M063#0150E | E | 6.8 | 63 | 105 | 42.8 | 6 | 150 | 1300 | 900 | 600 | – | 3 | 3 |
| TCJE106M063#0100E | E | 10 | 63 | 105 | 63 | 6 | 100 | 1600 | 1100 | 700 | – | 3 | 3 |
| TCJE106M063#0150E | E | 10 | 63 | 105 | 63 | 6 | 150 | 1300 | 900 | 600 | – | 3 | 3 |
| TCJE156M063#0150E | E | 15 | 63 | 105 | 94.5 | 8 | 150 | 1300 | 900 | 600 | – | 2 | 3 |
| **75 Volt** | | | | | | | | | | | | | |
| TCJD475M075#0150E | D | 4.7 | 75 | 105 | 35.3 | 6 | 150 | 1200 | 800 | 500 | – | 3 | 3 |
| TCJD685M075#0120E | D | 6.8 | 75 | 105 | 51 | 6 | 120 | 1400 | 1000 | 600 | – | 3 | 3 |
| **100 Volt** | | | | | | | | | | | | | |
| TCJD475M100#0250E | D | 4.7 | 100 | 105 | 47 | 8 | 250 | 900 | 600 | 400 | – | 4 | 3 |
| **125 Volt** | | | | | | | | | | | | | |
| TCJD335M125#0250E | D | 3.3 | 125 | 105 | 41.2 | 8 | 250 | 900 | 600 | 400 | – | 4 | 3 |

Moisture Sensitivity Level (MSL) is defined according to J-STD-020. All technical data relates to an ambient temperature of +25°C. Capacitance and DF are measured at 120Hz, 0.5RMS with DC bias of 2.2 volts. DCL is measured at rated voltage after 5 minutes. ESR allowed to move up to 1.25 times catalog limit post mounting. For typical weight and composition see page 253.

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




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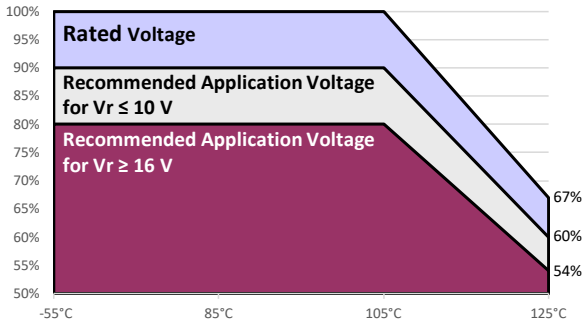
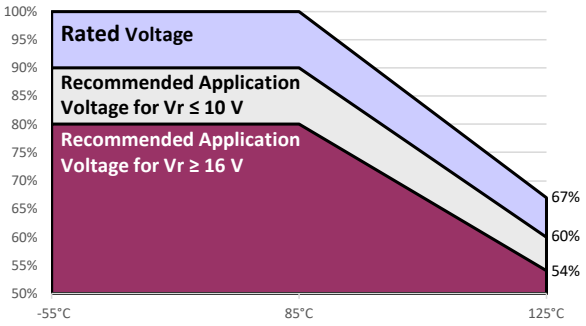
### RECOMMENDED DERATING FACTOR

Voltage and temperature derating as percentage of Vr

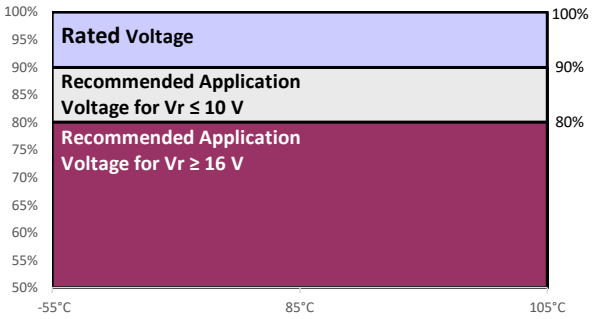
**Product Category 0**



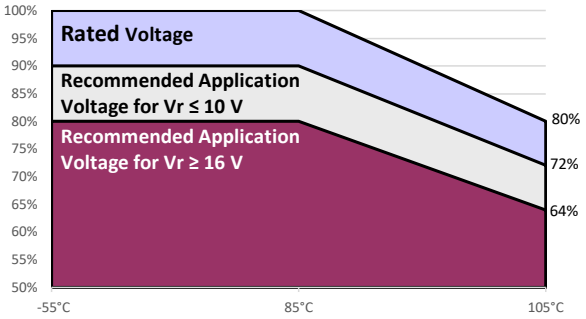

**Product Category 1**



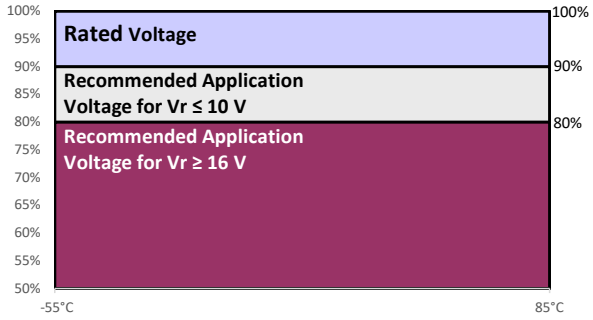

**Product Category 2**




**Product Category 3, 4**




**Product Category 5**





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### PRODUCT CATEGORY 0, 1 (TEMPERATURE RANGE -55°C TO +125°C)

| TEST | Condition | | | Characteristics | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Endurance** | Apply rated voltage (Ur) at 85ºC (CATEGORY 1) or 105ºC (CATEGORY 0) or 2/3 rated voltage (Ur) at 125ºC (all CATEGORIES) for 2000 hours through a circuit impedance of ≤0.1Ω/V. Stabilize at room temperature for 1-2 hours before measuring. | | | **Visual examination** | no visible damage | | | | | |
| | | | | **DCL** | 1.25 x initial limit | | | | | |
| | | | | **ΔC/C** | within +10/-20% of initial value | | | | | |
| | | | | **DF** | 1.5 x initial limit | | | | | |
| | | | | **ESR** | 2 x initial limit | | | | | |
| **Storage Life** | Store at 125ºC, 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 | | | | | |
| | | | | **ΔC/C** | within +10/-20% of initial value | | | | | |
| | | | | **DF** | 1.5 x initial limit | | | | | |
| | | | | **ESR** | 2 x initial limit | | | | | |
| **Humidity** | Store at 65ºC and 95% relative humidity fo 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 +35/-5% of initial value | | | | | |
| | | | | **DF** | 1.5 x initial limit | | | | | |
| | | | | **ESR** | 2 x initial limit | | | | | |
| **Temperature Stability** | Step | Temperature °C | Duration (min) | | +20ºC | -55ºC | +20ºC | +85ºC | +125ºC | +20ºC |
| | 1 | +20 | 15 | **DCL** | IL* | n/a | IL* | 10 x IL* | 12.5 x IL* | IL* |
| | 2 | -55 | 15 | | | | | | | |
| | 3 | +20 | 15 | **ΔC/C** | n/a | +0/-20% | ±5% | +20/-0% | +30/-0% | ±5% |
| | 4 | +85 | 15 | | | | | | | |
| | 5 | +125 | 15 | **DF** | IL* | 1.5 x IL* | IL* | 1.5 x IL* | 2 x IL* | IL* |
| | 6 | +20 | 15 | | | | | | | |
| **Surge Voltage** | Apply 1.3x 2/3x rated voltage (Ur) at 125ºC 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 | | | | | |
| | | | | **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** | 1.25 x 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** | 1.25 x initial limit | | | | | |

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



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

| TEST | Condition | Characteristics | |
|---|---|---|---|
| **Endurance** | Apply rated voltage (Ur) at 85ºC 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 +10/-20% of initial value |
| | | **DF** | 1.5 x initial limit |
| | | **ESR** | 2 x initial limit |
| **Storage Life** | Store at 105ºC, no voltage applied, for 2000 hours. Stabilize at room temperature for 1-2 hours before measuring. | **Visual examination** | no visible damage |
| | | **DCL ($V_R$ ≤ 75V)** | 1.25 x initial limit |
| | | **DCL ($V_R$ > 75V)** | 2 x initial limit |
| | | **ΔC/C** | within +10/-20% of initial value |
| | | **DF** | 1.5 x initial limit |
| | | **ESR** | 2 x initial limit |
| **Humidity** | Store at 65ºC 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 +35/-5% of initial value |
| | | **DF** | 1.5 x initial limit |
| | | **ESR** | 2 x initial limit |

**Temperature Stability**

| Step | Temperature °C | Duration (min) |
|---|---|---|
| 1 | +20 | 15 |
| 2 | -55 | 15 |
| 3 | +20 | 15 |
| 4 | +85 | 15 |
| 5 | +105 | 15 |
| 6 | +20 | 15 |

| | +20ºC | -55ºC | +20ºC | +85ºC | +105ºC | +20ºC |
|---|---|---|---|---|---|---|
| **DCL** | IL* | n/a | IL* | 10 x IL* | 12.5 x IL* | IL* |
| **ΔC/C** | n/a | +0/-20% | ±5% | +20/-0% | +30/-0% | ±5% |
| **DF** | IL* | 1.5 x IL* | IL* | 1.5 x IL* | 2 x IL* | IL* |

| | | | |
|---|---|---|---|
| **Surge Voltage** | Apply 1.3x rated voltage (Ur) at 105ºC for CATEGORY 2, or apply 1.3x 0.8x rated voltage (Ur) at 105ºC 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 |
| | | **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** | 1.25 x 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** | 1.25 x 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 | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Endurance** | Apply rated voltage (Ur) at 85ºC for 2000 hours through a circuit impedance of ≤0.1Ω/V. Stabilize at room temperature for 1-2 hours before measuring. | | | **Visual examination** | no visible damage | | | | |
| | | | | **DCL** | 1.25 x initial limit | | | | |
| | | | | **ΔC/C** | within +10/-20% of initial value | | | | |
| | | | | **DF** | 1.5 x initial limit | | | | |
| | | | | **ESR** | 2 x initial limit | | | | |
| **Storage Life** | Store at 85ºC, 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 | | | | |
| | | | | **ΔC/C** | within +10/-20% of initial value | | | | |
| | | | | **DF** | 1.5 x initial limit | | | | |
| | | | | **ESR** | 2 x initial limit | | | | |
| **Humidity** | Store at 65ºC 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 | | | | |
| | | | | **ΔC/C** | within +35/-5% of initial value | | | | |
| | | | | **DF** | 1.5 x initial limit | | | | |
| | | | | **ESR** | 2 x initial limit | | | | |
| **Temperature Stability** | Step | Temperature°C | Duration(min) | | +20ºC | -55ºC | +20ºC | +85ºC | +20ºC |
| | 1 | +20 | 15 | **DCL** | IL* | n/a | IL* | 10 x IL* | IL* |
| | 2 | -55 | 15 | **ΔC/C** | n/a | +0/-20% | ±5% | +20/-0% | ±5% |
| | 3 | +20 | 15 | | | | | | |
| | 4 | +85 | 15 | **DF** | IL* | 1.5 x IL* | IL* | 1.5 x IL* | IL* |
| | 5 | +125 | 15 | | | | | | |
| **Surge Voltage** | Apply 1.3x rated voltage (Ur) at 85ºC 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 | | | | |
| | | | | **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** | 1.25 x 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** | 1.25 x initial limit | | | | |

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


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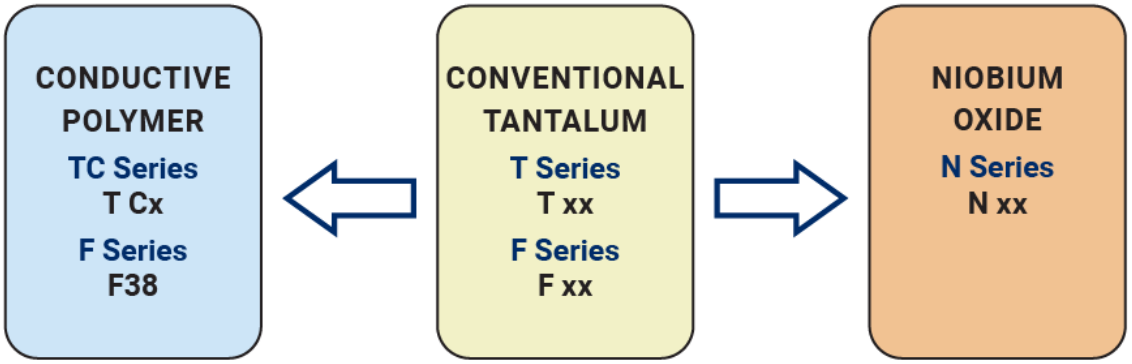
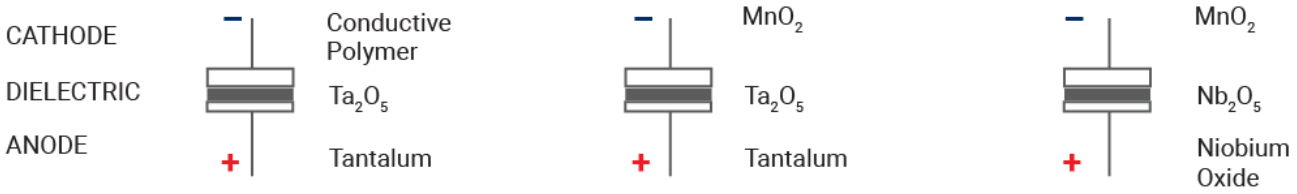
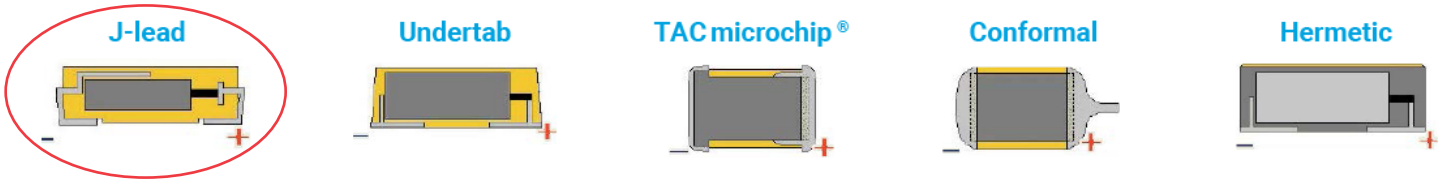
## SOLID ELECTROLYTIC CAPACITOR ROADMAP

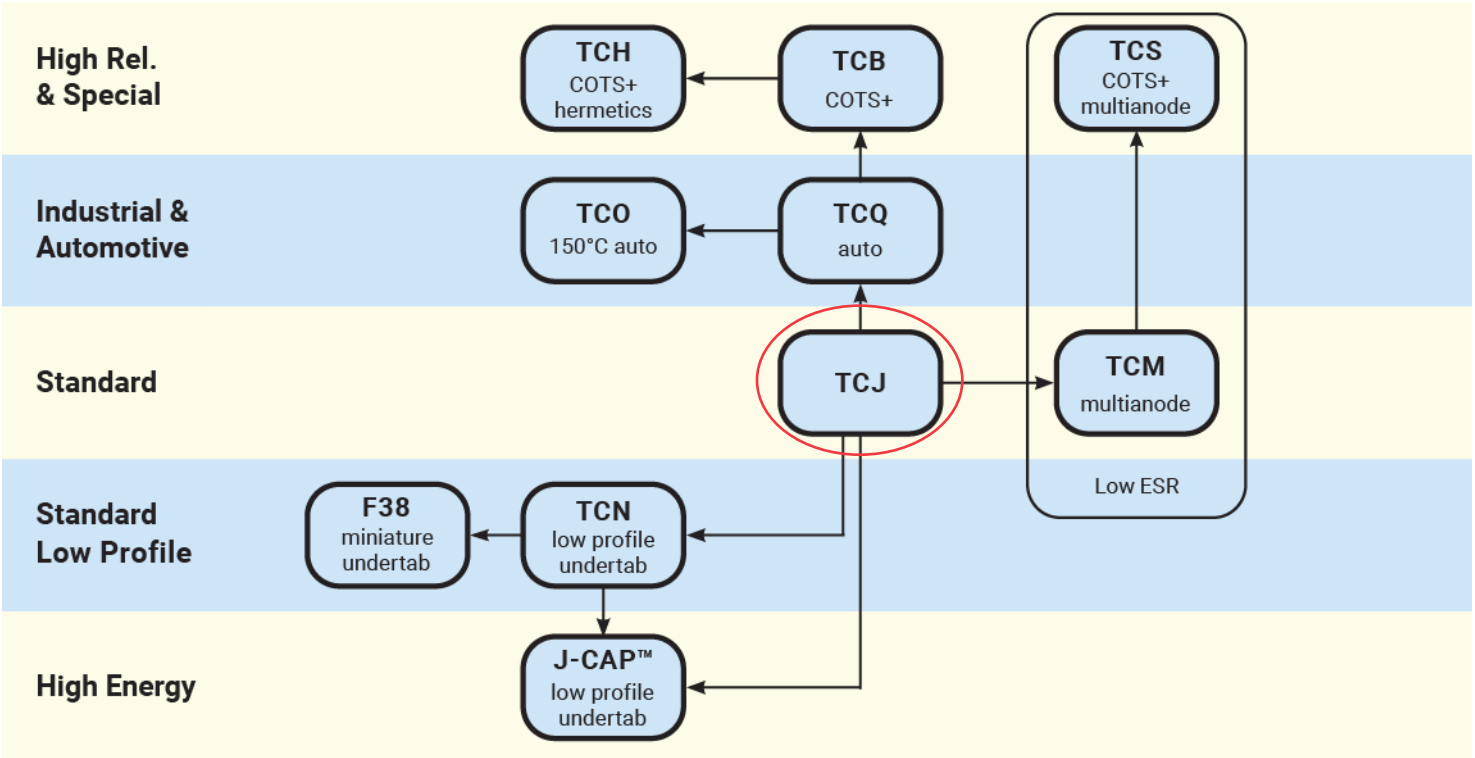



## FIVE CAPACITOR CONSTRUCTION STYLES




## SERIES LINE UP : Conductive Polymer

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