

# TRJ Series



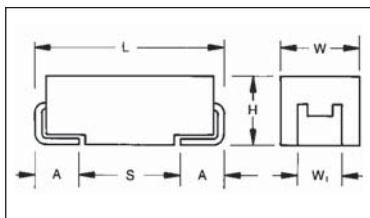
## Professional Tantalum Chip Capacitor



- Improved reliability – 2x standard
- DCL reduced by 25% to 0.0075 CV
- Robust against higher thermo-mechanical stresses during assembly process
- CV range: 0.10-470 $\mu$ F / 4-50V
- 5 case sizes available
- 123 low ESR parts released
- Automotive, medical, aerospace, military and other high-end applications



SnPb termination option is not RoHS compliant.



For part marking see page 127

### CASE DIMENSIONS: millimeters (inches)

| Code | EIA Code | EIA Metric | L $\pm$ 0.20 (0.008) | W $\pm$ 0.20 (0.008) -0.10 (0.004) | H $\pm$ 0.20 (0.008) -0.10 (0.004) | W $\pm$ 0.20 (0.008) | A $\pm$ 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) |

W<sub>1</sub> dimension applies to the termination width for A dimensional area only.

### HOW TO ORDER

| TRJ  | B                            | 105                                                                                                                                    | *                             | 035                                                                                                                      | R                                                                                                                                                                                                                                           | RJ                                             | —                                                                                                        |
|------|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|--------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| 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>K=±10%<br>M=±20% | Rated DC Voltage<br>004 = 4V<br>006 = 6.3V<br>010 = 10V<br>016 = 16V<br>020 = 20V<br>025 = 25V<br>035 = 35V<br>050 = 50V | Packaging<br>R = Pure Tin 7" Reel<br>S = Pure Tin 13" Reel<br>A = Gold Plating 7" Reel<br>B = Gold Plating 13" Reel<br>H = Tin Lead 7" Reel<br>(Contact Manufacturer)<br>K = Tin Lead 13" Reel<br>(Contact Manufacturer)<br>H, K = Non RoHS | Standard Suffix<br>OR<br>0100<br>Low ESR in mΩ | Additional characters may be added for special requirements<br>V = Dry pack Option (selected codes only) |

### TECHNICAL SPECIFICATIONS

|                                    |                                                                                                         |     |     |    |    |    |    |    |    |  |
|------------------------------------|---------------------------------------------------------------------------------------------------------|-----|-----|----|----|----|----|----|----|--|
| Technical Data:                    | All technical data relate to an ambient temperature of +25°C                                            |     |     |    |    |    |    |    |    |  |
| Capacitance Range:                 | 0.10 $\mu$ F to 470 $\mu$ F                                                                             |     |     |    |    |    |    |    |    |  |
| Capacitance Tolerance:             | ±10%; ±20%                                                                                              |     |     |    |    |    |    |    |    |  |
| Leakage Current DCL:               | 0.0075CV                                                                                                |     |     |    |    |    |    |    |    |  |
| Rated Voltage (V <sub>R</sub> )    | ≤ +85°C:                                                                                                | 4   | 6.3 | 10 | 16 | 20 | 25 | 35 | 50 |  |
| Category Voltage (V <sub>C</sub> ) | ≤ +125°C:                                                                                               | 2.7 | 4   | 7  | 10 | 13 | 17 | 23 | 33 |  |
| Surge Voltage (V <sub>S</sub> )    | ≤ +85°C:                                                                                                | 5.2 | 8   | 13 | 20 | 26 | 32 | 46 | 65 |  |
| Surge Voltage (V <sub>S</sub> )    | ≤ +125°C:                                                                                               | 3.4 | 5   | 8  | 13 | 16 | 20 | 28 | 40 |  |
| Temperature Range:                 | -55°C to +125°C                                                                                         |     |     |    |    |    |    |    |    |  |
| Reliability:                       | 0.5% per 1000 hours at 85°C, V <sub>R</sub> with 0.1 $\Omega$ /V series impedance, 60% confidence level |     |     |    |    |    |    |    |    |  |
| Termination Plating:               | Sn Plating (standard), Gold and SnPb Plating upon request                                               |     |     |    |    |    |    |    |    |  |
|                                    | Meets requirements of AEC-Q200                                                                          |     |     |    |    |    |    |    |    |  |



## Professional Tantalum Chip Capacitor

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

| Capacitance |      | Rated Voltage DC (V <sub>R</sub> ) to 85°C |                         |                                 |                           |                          |                        |                          |                        |
|-------------|------|--------------------------------------------|-------------------------|---------------------------------|---------------------------|--------------------------|------------------------|--------------------------|------------------------|
| μF          | Code | 4V (G)                                     | 6.3V (J)                | 10V (A)                         | 16V (C)                   | 20V (D)                  | 25V (E)                | 35V (V)                  | 50V (T)                |
| 0.10        | 104  |                                            |                         |                                 |                           |                          |                        | A                        |                        |
| 0.15        | 154  |                                            |                         |                                 |                           |                          |                        | A, A(6000)               |                        |
| 0.22        | 224  |                                            |                         |                                 |                           |                          |                        | A, A(6000)               | A, A(7000)             |
| 0.33        | 334  |                                            |                         |                                 |                           |                          |                        | A, A(6000)               | A                      |
| 0.47        | 474  |                                            |                         |                                 |                           |                          | A, A(7000)             | A, A(4000)               | B                      |
| 0.68        | 684  |                                            |                         |                                 |                           |                          | A, A(6000)             | A, A(6000)               | B, B(2000)             |
| 1.0         | 105  |                                            |                         |                                 | A                         | A, A(3000)               | A, A(3000)             | A, B, A(3000), B(2000)   | C, B, B(2000)          |
| 1.5         | 155  |                                            |                         | A                               |                           | A, A(3000)               | A, B, A(3000)          | A, B, A(2000), B(2500)   | C, C(1500)             |
| 2.2         | 225  |                                            |                         | A                               | A, A(3500)                | A, A(3000)               | A, B, A(1600), B(1200) | B, B(2000)               | C, D, C(1000), D(1200) |
| 3.3         | 335  |                                            |                         |                                 | A, B, A(3500)             | A, B, A(2500), B(1300)   | B, B(2000)             | B, C, D, B(1000), C(800) | C, D, C(1000), D(800)  |
| 4.7         | 475  |                                            |                         | A, A(2000)                      | A, B, A(2000), B(1500)    | A, B, A(1800), B(1000)   | B, B(1000)             | B, C, D, B(1500), C(600) | D, D(600)              |
| 6.8         | 685  |                                            |                         | A, B, A(1800)                   | A, B, C, A(1500), B(1200) | B, C, B(1000)            | B, C, B(1000), C(600)  | C, D, C(600)             | D                      |
| 10          | 106  |                                            | A, B, A(1500)           | A, B, A(1800), B(800)           | B, C, B(800)              | B, C, B(1000), C(500)    | C, D, C(600)           | C, D, C(600), D(250,400) | E, E(300,400)          |
| 15          | 156  | B                                          | A, B, A(1500), B(700)   | A, B, C, A(1000), B(600)        | B, B(800)                 | B, C, D, B(500), C(400)  | C, D, C(500), D(300)   | D, D(225)                |                        |
| 22          | 226  |                                            | A, B, C, A(900), B(600) | B, B(700)                       | B, C, D, B(600), C(350)   | C, D, C(400), D(150,300) | D, D(300)              | D, D(200,400)            |                        |
| 33          | 336  | C                                          | B, C, B(600)            | B, C, D, B(650), C(300)         | C, C(300)                 | C, D, C(300), D(250)     | D, D(400)              | E, E(250)                |                        |
| 47          | 476  |                                            | B, C, B(500), C(250)    | C, D, C(300)                    | C, D, C(350), D(200)      | D, D(200)                | D, E, D(250), E(150)   |                          |                        |
| 68          | 686  |                                            | C, C(200)               | C, C(300)                       | D, D(150)                 | D, E, D(200), E(120,200) |                        |                          |                        |
| 100         | 107  |                                            | C, C(300)               | C, D, E, C(200), D(150), E(100) | D, E, D(150), E(150)      | E, E(150)                |                        |                          |                        |
| 150         | 157  |                                            | C, D, C(300), D(150)    | D, E, D(150), E(150)            | E, E(150)                 |                          |                        |                          |                        |
| 220         | 227  |                                            | D, D(150)               | D, E, E(150)                    |                           |                          |                        |                          |                        |
| 330         | 337  |                                            | D, E, E(150)            | E, E(100)                       |                           |                          |                        |                          |                        |
| 470         | 477  |                                            | E, E(200)               |                                 |                           |                          |                        |                          |                        |

Not recommended for new designs, higher voltage or smaller case size substitution are offered.

Available Ratings, (ESR ratings in mOhms in brackets)

Engineering samples - please contact manufacturer

\*Codes under development - subject to change

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

### RATINGS & PART NUMBER REFERENCE

| AVX<br>Part No.                  | Case<br>Size | Capacitance<br>(µF) | Rated<br>Voltage<br>(V) | DCL<br>(µA)<br>Max. | DF<br>%<br>Max. | ESR<br>Max. (mΩ)<br>@100kHz | MSL             | 100kHz RMS Current (mA) |      |       | 100kHz RMS Voltage (mV) |      |       |
|----------------------------------|--------------|---------------------|-------------------------|---------------------|-----------------|-----------------------------|-----------------|-------------------------|------|-------|-------------------------|------|-------|
|                                  |              |                     |                         |                     |                 |                             |                 | 25°C                    | 85°C | 125°C | 25°C                    | 85°C | 125°C |
| 4 Volt @ 85°C (2.7 Volt @ 125°C) |              |                     |                         |                     |                 |                             |                 |                         |      |       |                         |      |       |
| TRJB156*004#RJ                   | B            | 15                  | 4                       | 0.45                | 6               | 3000                        | 1               | 168                     | 151  | 67    | 505                     | 454  | 202   |
| TRJC336*004#RJ                   | C            | 33                  | 4                       | 1.0                 | 6               | 2000                        | 1               | 235                     | 211  | 94    | 469                     | 422  | 188   |
| 6.3 Volt @ 85°C (4 Volt @ 125°C) |              |                     |                         |                     |                 |                             |                 |                         |      |       |                         |      |       |
| TRJA106*006#RJ                   | A            | 10                  | 6.3                     | 0.45                | 6               | 2200                        | 1               | 185                     | 166  | 74    | 406                     | 366  | 162   |
| TRJA106*006#1500                 | A            | 10                  | 6.3                     | 0.45                | 6               | 1500                        | 1               | 224                     | 201  | 89    | 335                     | 302  | 134   |
| TRJB106*006#RJ                   | B            | 10                  | 6.3                     | 0.45                | 6               | 3000                        | 1               | 168                     | 151  | 67    | 505                     | 454  | 202   |
| TRJA156*006#RJ                   | A            | 15                  | 6.3                     | 0.68                | 6               | 2030                        | 1               | 192                     | 173  | 77    | 390                     | 351  | 156   |
| TRJA156*006#1500                 | A            | 15                  | 6.3                     | 0.68                | 6               | 1500                        | 1               | 224                     | 201  | 89    | 335                     | 302  | 134   |
| TRJB156*006#RJ                   | B            | 15                  | 6.3                     | 0.68                | 6               | 2030                        | 1               | 205                     | 184  | 82    | 415                     | 374  | 166   |
| TRJB156*006#0700                 | B            | 15                  | 6.3                     | 0.68                | 6               | 700                         | 1               | 348                     | 314  | 139   | 244                     | 220  | 98    |
| TRJA226*006#RJ                   | A            | 22                  | 6.3                     | 0.99                | 6               | 1700                        | 1               | 210                     | 189  | 84    | 357                     | 321  | 143   |
| TRJA226*006#0900                 | A            | 22                  | 6.3                     | 0.99                | 6               | 900                         | 1               | 289                     | 260  | 115   | 260                     | 234  | 104   |
| TRJB226*006#RJ                   | B            | 22                  | 6.3                     | 0.99                | 6               | 1880                        | 1               | 213                     | 191  | 85    | 400                     | 360  | 160   |
| TRJB226*006#0600                 | B            | 22                  | 6.3                     | 0.99                | 6               | 600                         | 1               | 376                     | 339  | 151   | 226                     | 203  | 90    |
| TRJC226*006#RJ                   | C            | 22                  | 6.3                     | 0.99                | 6               | 2000                        | 1               | 235                     | 211  | 94    | 469                     | 422  | 188   |
| TRJB336*006#RJ                   | B            | 33                  | 6.3                     | 1.5                 | 6               | 1740                        | 1               | 221                     | 199  | 88    | 385                     | 346  | 154   |
| TRJB336*006#0600                 | B            | 33                  | 6.3                     | 1.5                 | 6               | 600                         | 1               | 376                     | 339  | 151   | 226                     | 203  | 90    |
| TRJC336*006#RJ                   | C            | 33                  | 6.3                     | 1.5                 | 6               | 1800                        | 1               | 247                     | 222  | 99    | 445                     | 400  | 178   |
| TRJB476*006#RJ                   | B            | 47                  | 6.3                     | 2.1                 | 6               | 1620                        | 1               | 229                     | 206  | 92    | 371                     | 334  | 148   |
| TRJB476*006#0500                 | B            | 47                  | 6.3                     | 2.1                 | 6               | 500                         | 1               | 412                     | 371  | 165   | 206                     | 186  | 82    |
| TRJC476*006#RJ                   | C            | 47                  | 6.3                     | 2.1                 | 6               | 540                         | 1               | 451                     | 406  | 181   | 244                     | 219  | 97    |
| TRJC476*006#0250                 | C            | 47                  | 6.3                     | 2.1                 | 6               | 250                         | 1               | 663                     | 597  | 265   | 166                     | 149  | 66    |
| TRJC686*006#RJ                   | C            | 68                  | 6.3                     | 3.1                 | 6               | 490                         | 1               | 474                     | 426  | 190   | 232                     | 209  | 93    |
| TRJC686*006#0200                 | C            | 68                  | 6.3                     | 3.1                 | 6               | 200                         | 1               | 742                     | 667  | 297   | 148                     | 133  | 59    |
| TRJC107*006#RJ                   | C            | 100                 | 6.3                     | 4.5                 | 6               | 440                         | 1               | 500                     | 450  | 200   | 220                     | 198  | 88    |
| TRJC107*006#0300                 | C            | 100                 | 6.3                     | 4.5                 | 6               | 300                         | 1               | 606                     | 545  | 242   | 182                     | 163  | 73    |
| TRJC157*006#RJ                   | C            | 150                 | 6.3                     | 6.8                 | 8               | 500                         | 1               | 469                     | 422  | 188   | 235                     | 211  | 94    |
| TRJC157*006#0300                 | C            | 150                 | 6.3                     | 6.8                 | 8               | 300                         | 1               | 606                     | 545  | 242   | 182                     | 163  | 73    |
| TRJD157*006#RJ                   | D            | 150                 | 6.3                     | 6.8                 | 6               | 400                         | 1               | 612                     | 551  | 245   | 245                     | 220  | 98    |
| TRJD157*006#0150                 | D            | 150                 | 6.3                     | 6.8                 | 6               | 150                         | 1               | 1000                    | 900  | 400   | 150                     | 135  | 60    |
| TRJD227*006#RJ                   | D            | 220                 | 6.3                     | 9.9                 | 8               | 360                         | 1               | 645                     | 581  | 258   | 232                     | 209  | 93    |
| TRJD227*006#0150                 | D            | 220                 | 6.3                     | 9.9                 | 8               | 150                         | 1               | 1000                    | 900  | 400   | 150                     | 135  | 60    |
| TRJD337*006#RJ                   | D            | 330                 | 6.3                     | 14                  | 8               | 400                         | 1               | 612                     | 551  | 245   | 245                     | 220  | 98    |
| TRJE337*006#RJ                   | E            | 330                 | 6.3                     | 14                  | 8               | 330                         | 1 <sup>1)</sup> | 707                     | 636  | 283   | 233                     | 210  | 93    |
| TRJE337*006#0150                 | E            | 330                 | 6.3                     | 14                  | 8               | 150                         | 1 <sup>1)</sup> | 1049                    | 944  | 420   | 157                     | 142  | 63    |
| TRJE477*006#RJ                   | E            | 470                 | 6.3                     | 21                  | 8               | 250                         | 1 <sup>1)</sup> | 812                     | 731  | 325   | 203                     | 183  | 81    |
| TRJE477*006#0200                 | E            | 470                 | 6.3                     | 21                  | 8               | 200                         | 1 <sup>1)</sup> | 908                     | 817  | 363   | 182                     | 163  | 73    |
| 10 Volt @ 85°C (7 Volt @ 125°C)  |              |                     |                         |                     |                 |                             |                 |                         |      |       |                         |      |       |
| TRJA155*010#RJ                   | A            | 1.5                 | 10                      | 0.30                | 6               | 7000                        | 1               | 104                     | 93   | 41    | 725                     | 652  | 290   |
| TRJA225*010#RJ                   | A            | 2.2                 | 10                      | 0.30                | 6               | 7000                        | 1               | 104                     | 93   | 41    | 725                     | 652  | 290   |
| TRJA475*010#RJ                   | A            | 4.7                 | 10                      | 0.35                | 6               | 2900                        | 1               | 161                     | 145  | 64    | 466                     | 420  | 187   |
| TRJA475*010#2000                 | A            | 4.7                 | 10                      | 0.35                | 6               | 2000                        | 1               | 194                     | 174  | 77    | 387                     | 349  | 155   |
| TRJA685*010#RJ                   | A            | 6.8                 | 10                      | 0.51                | 6               | 2650                        | 1               | 168                     | 151  | 67    | 446                     | 401  | 178   |
| TRJA685*010#1800                 | A            | 6.8                 | 10                      | 0.51                | 6               | 1800                        | 1               | 204                     | 184  | 82    | 367                     | 331  | 147   |
| TRJB685*010#RJ                   | B            | 6.8                 | 10                      | 0.51                | 6               | 3000                        | 1               | 168                     | 151  | 67    | 505                     | 454  | 202   |
| TRJA106*010#RJ                   | A            | 10                  | 10                      | 0.75                | 6               | 2200                        | 1               | 185                     | 166  | 74    | 406                     | 366  | 162   |
| TRJA106*010#1800                 | A            | 10                  | 10                      | 0.75                | 6               | 1800                        | 1               | 204                     | 184  | 82    | 367                     | 331  | 147   |
| TRJB106*010#RJ                   | B            | 10                  | 10                      | 0.75                | 6               | 2200                        | 1               | 197                     | 177  | 79    | 432                     | 389  | 173   |
| TRJB106*010#0800                 | B            | 10                  | 10                      | 0.75                | 6               | 800                         | 1               | 326                     | 293  | 130   | 261                     | 235  | 104   |
| TRJA156*010#RJ                   | A            | 15                  | 10                      | 1.10                | 6               | 1800                        | 1               | 204                     | 184  | 82    | 367                     | 331  | 147   |
| TRJA156*010#1000                 | A            | 15                  | 10                      | 1.10                | 6               | 1000                        | 1               | 274                     | 246  | 110   | 274                     | 246  | 110   |
| TRJB156*010#RJ                   | B            | 15                  | 10                      | 1.1                 | 6               | 2030                        | 1               | 205                     | 184  | 82    | 415                     | 374  | 166   |
| TRJB156*010#0600                 | B            | 15                  | 10                      | 1.1                 | 6               | 600                         | 1               | 376                     | 339  | 151   | 226                     | 203  | 90    |
| TRJC156*010#RJ                   | C            | 15                  | 10                      | 1.1                 | 6               | 2000                        | 1               | 235                     | 211  | 94    | 469                     | 422  | 188   |
| TRJB226*010#RJ                   | B            | 22                  | 10                      | 1.7                 | 6               | 1880                        | 1               | 213                     | 191  | 85    | 400                     | 360  | 160   |
| TRJB226*010#0700                 | B            | 22                  | 10                      | 1.7                 | 6               | 700                         | 1               | 348                     | 314  | 139   | 244                     | 220  | 98    |
| TRJB336*010#RJ                   | B            | 33                  | 10                      | 2.5                 | 6               | 1000                        | 1               | 292                     | 262  | 117   | 292                     | 262  | 117   |
| TRJB336*010#0650                 | B            | 33                  | 10                      | 2.5                 | 6               | 650                         | 1               | 362                     | 325  | 145   | 235                     | 212  | 94    |
| TRJC336*010#RJ                   | C            | 33                  | 10                      | 2.5                 | 6               | 590                         | 1               | 432                     | 389  | 173   | 255                     | 229  | 102   |
| TRJC336*010#0300                 | C            | 33                  | 10                      | 2.5                 | 6               | 300                         | 1               | 606                     | 545  | 242   | 182                     | 163  | 73    |
| TRJD336*010#RJ                   | D            | 33                  | 10                      | 2.5                 | 6               | 1100                        | 1               | 369                     | 332  | 148   | 406                     | 366  | 162   |
| TRJC476*010#RJ                   | C            | 47                  | 10                      | 3.5                 | 6               | 540                         | 1               | 451                     | 406  | 181   | 244                     | 219  | 97    |
| TRJC476*010#0300                 | C            | 47                  | 10                      | 3.5                 | 6               | 300                         | 1               | 606                     | 545  | 242   | 182                     | 163  | 73    |
| TRJD476*010#RJ                   | D            | 47                  | 10                      | 3.5                 | 6               | 400                         | 1               | 612                     | 551  | 245   | 245                     | 220  | 98    |
| TRJC686*010#RJ                   | C            | 68                  | 10                      | 5.1                 | 6               | 490                         | 1               | 474                     | 426  | 190   | 232                     | 209  | 93    |
| TRJC686*010#0300                 | C            | 68                  | 10                      | 5.1                 | 6               | 300                         | 1               | 606                     | 545  | 242   | 182                     | 163  | 73    |
| TRJC107*010#RJ                   | C            | 100                 | 10                      | 7.5                 | 8               | 500                         | 1               | 469                     | 422  | 188   | 235                     | 211  | 94    |
| TRJC107*010#0200                 | C            | 100                 | 10                      | 7.5                 | 8               | 200                         | 1               | 742                     | 667  | 297   | 148                     | 133  | 59    |
| TRJD107*010#RJ                   | D            | 100                 | 10                      | 7.5                 | 6               | 440                         | 1               | 584                     | 525  | 234   | 257                     | 231  | 103   |

<sup>1)</sup> Dry pack option (see How to order) recommended for reduction of stress during soldering. Dry pack parts should be treated as MSL 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, 0.5V RMS with a maximum DC bias of 2.2 volts. DCL is measured at rated voltage after 5 minutes.

The EIA & CECC standards for low ESR Solid Tantalum Capacitors allow an ESR movement to 1.25 times catalogue limit post mounting.

For typical weight and composition see page 120.

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

### RATINGS & PART NUMBER REFERENCE

| AVX Part No.                            | Case Size | Capacitance (µF) | Rated Voltage (V) | DCL (µA) Max. | DF % Max. | ESR Max. (mΩ) @100kHz | MSL             | 100kHz RMS Current (mA) |      |       | 100kHz RMS Voltage (mV) |      |       |
|-----------------------------------------|-----------|------------------|-------------------|---------------|-----------|-----------------------|-----------------|-------------------------|------|-------|-------------------------|------|-------|
|                                         |           |                  |                   |               |           |                       |                 | 25°C                    | 85°C | 125°C | 25°C                    | 85°C | 125°C |
| TRJD107*010#0150                        | D         | 100              | 10                | 7.5           | 6         | 150                   | 1               | 1000                    | 900  | 400   | 150                     | 135  | 60    |
| TRJE107*010#RJ                          | E         | 100              | 10                | 7.5           | 6         | 440                   | 1 <sup>1)</sup> | 612                     | 551  | 245   | 269                     | 242  | 108   |
| TRJE107*010#0100                        | E         | 100              | 10                | 7.5           | 6         | 100                   | 1 <sup>1)</sup> | 1285                    | 1156 | 514   | 128                     | 116  | 51    |
| TRJD157*010#RJ                          | D         | 150              | 10                | 11            | 8         | 400                   | 1               | 612                     | 551  | 245   | 245                     | 220  | 98    |
| TRJD157*010#0150                        | D         | 150              | 10                | 11            | 8         | 150                   | 1               | 1000                    | 900  | 400   | 150                     | 135  | 60    |
| TRJE157*010#RJ                          | E         | 150              | 10                | 11            | 8         | 400                   | 1 <sup>1)</sup> | 642                     | 578  | 257   | 257                     | 231  | 103   |
| TRJE157*010#0150                        | E         | 150              | 10                | 11            | 8         | 150                   | 1 <sup>1)</sup> | 1049                    | 944  | 420   | 157                     | 142  | 63    |
| TRJD227*010#RJ                          | D         | 220              | 10                | 17            | 8         | 500                   | 1               | 548                     | 493  | 219   | 274                     | 246  | 110   |
| TRJE227*010#RJ                          | E         | 220              | 10                | 17            | 8         | 360                   | 1 <sup>1)</sup> | 677                     | 609  | 271   | 244                     | 219  | 97    |
| TRJE227*010#0150                        | E         | 220              | 10                | 17            | 8         | 150                   | 1 <sup>1)</sup> | 1049                    | 944  | 420   | 157                     | 142  | 63    |
| TRJE337*010#RJ                          | E         | 330              | 10                | 25            | 8         | 300                   | 1 <sup>1)</sup> | 742                     | 667  | 297   | 222                     | 200  | 89    |
| TRJE337*010#100                         | E         | 330              | 10                | 25            | 8         | 10.0                  | 1 <sup>1)</sup> | 1285                    | 1156 | 514   | 128                     | 116  | 51    |
| <b>16 Volt @ 85°C (10 Volt @ 125°C)</b> |           |                  |                   |               |           |                       |                 |                         |      |       |                         |      |       |
| TRJA105*016#RJ                          | A         | 1.0              | 16                | 0.30          | 6         | 10000                 | 1               | 87                      | 78   | 35    | 866                     | 779  | 346   |
| TRJA225*016#RJ                          | A         | 2.2              | 16                | 0.30          | 6         | 4550                  | 1               | 128                     | 116  | 51    | 584                     | 526  | 234   |
| TRJA225*016#3500                        | A         | 2.2              | 16                | 0.30          | 6         | 3500                  | 1               | 146                     | 132  | 59    | 512                     | 461  | 205   |
| TRJA335*016#RJ                          | A         | 3.3              | 16                | 0.40          | 6         | 3740                  | 1               | 142                     | 127  | 57    | 530                     | 477  | 212   |
| TRJA335*016#3500                        | A         | 3.3              | 16                | 0.40          | 6         | 3500                  | 1               | 146                     | 132  | 59    | 512                     | 461  | 205   |
| TRJB335*016#RJ                          | B         | 3.3              | 16                | 0.40          | 6         | 4500                  | 1               | 137                     | 124  | 55    | 618                     | 557  | 247   |
| TRJA475*016#RJ                          | A         | 4.7              | 16                | 0.56          | 6         | 3160                  | 1               | 154                     | 139  | 62    | 487                     | 438  | 195   |
| TRJA475*016#2000                        | A         | 4.7              | 16                | 0.56          | 6         | 2000                  | 1               | 194                     | 174  | 77    | 387                     | 349  | 155   |
| TRJB475*016#RJ                          | B         | 4.7              | 16                | 0.56          | 6         | 3160                  | 1               | 164                     | 148  | 66    | 518                     | 466  | 207   |
| TRJB475*016#1500                        | B         | 4.7              | 16                | 0.56          | 6         | 1500                  | 1               | 238                     | 214  | 95    | 357                     | 321  | 143   |
| TRJA685*016#RJ                          | A         | 6.8              | 16                | 0.82          | 4         | 2000                  | 1               | 194                     | 174  | 77    | 387                     | 349  | 155   |
| TRJA685*016#1500                        | A         | 6.8              | 16                | 0.82          | 4         | 1500                  | 1               | 224                     | 201  | 89    | 335                     | 302  | 134   |
| TRJB685*016#RJ                          | B         | 6.8              | 16                | 0.82          | 6         | 2650                  | 1               | 179                     | 161  | 72    | 475                     | 427  | 190   |
| TRJB685*016#1200                        | B         | 6.8              | 16                | 0.82          | 6         | 1200                  | 1               | 266                     | 240  | 106   | 319                     | 287  | 128   |
| TRJC685*016#RJ                          | C         | 6.8              | 16                | 0.82          | 6         | 2500                  | 1               | 210                     | 189  | 84    | 524                     | 472  | 210   |
| TRJB106*016#RJ                          | B         | 10               | 16                | 1.2           | 6         | 2200                  | 1               | 197                     | 177  | 79    | 432                     | 389  | 173   |
| TRJB106*016#0800                        | B         | 10               | 16                | 1.2           | 6         | 800                   | 1               | 326                     | 293  | 130   | 261                     | 235  | 104   |
| TRJC106*016#RJ                          | C         | 10               | 16                | 1.2           | 6         | 2000                  | 1               | 235                     | 211  | 94    | 469                     | 422  | 188   |
| TRJB156*016#RJ                          | B         | 15               | 16                | 1.8           | 6         | 2030                  | 1               | 205                     | 184  | 82    | 415                     | 374  | 166   |
| TRJB156*016#0800                        | B         | 15               | 16                | 1.8           | 6         | 800                   | 1               | 326                     | 293  | 130   | 261                     | 235  | 104   |
| TRJB226*016#RJ                          | B         | 22               | 16                | 2.6           | 6         | 1100                  | 1               | 278                     | 250  | 111   | 306                     | 275  | 122   |
| TRJB226*016#0600                        | B         | 22               | 16                | 2.6           | 6         | 600                   | 1               | 376                     | 339  | 151   | 226                     | 203  | 90    |
| TRJC226*016#RJ                          | C         | 22               | 16                | 2.6           | 6         | 700                   | 1               | 396                     | 357  | 159   | 277                     | 250  | 111   |
| TRJC226*016#0350                        | C         | 22               | 16                | 2.6           | 6         | 350                   | 1               | 561                     | 505  | 224   | 196                     | 177  | 78    |
| TRJD226*016#RJ                          | D         | 22               | 16                | 2.6           | 6         | 1100                  | 1               | 369                     | 332  | 148   | 406                     | 366  | 162   |
| TRJC336*016#RJ                          | C         | 33               | 16                | 4.0           | 6         | 590                   | 1               | 432                     | 389  | 173   | 255                     | 229  | 102   |
| TRJC336*016#0300                        | C         | 33               | 16                | 4.0           | 6         | 300                   | 1               | 606                     | 545  | 242   | 182                     | 163  | 73    |
| TRJC476*016#RJ                          | C         | 47               | 16                | 5.6           | 6         | 540                   | 1               | 451                     | 406  | 181   | 244                     | 219  | 97    |
| TRJC476*016#0350                        | C         | 47               | 16                | 5.6           | 6         | 350                   | 1               | 561                     | 505  | 224   | 196                     | 177  | 78    |
| TRJD476*016#RJ                          | D         | 47               | 16                | 5.6           | 6         | 540                   | 1               | 527                     | 474  | 211   | 285                     | 256  | 114   |
| TRJD476*016#0200                        | D         | 47               | 16                | 5.6           | 6         | 200                   | 1               | 866                     | 779  | 346   | 173                     | 156  | 69    |
| TRJD686*016#RJ                          | D         | 68               | 16                | 8.2           | 6         | 490                   | 1               | 553                     | 498  | 221   | 271                     | 244  | 108   |
| TRJD686*016#0150                        | D         | 68               | 16                | 8.2           | 6         | 150                   | 1               | 1000                    | 900  | 400   | 150                     | 135  | 60    |
| TRJD107*016#RJ                          | D         | 100              | 16                | 12            | 6         | 440                   | 1               | 584                     | 525  | 234   | 257                     | 231  | 103   |
| TRJD107*016#0150                        | D         | 100              | 16                | 12            | 6         | 150                   | 1               | 1000                    | 900  | 400   | 150                     | 135  | 60    |
| TRJE107*016#RJ                          | E         | 100              | 16                | 12            | 6         | 440                   | 1 <sup>1)</sup> | 612                     | 551  | 245   | 269                     | 242  | 108   |
| TRJE107*016#0150                        | E         | 100              | 16                | 12            | 6         | 150                   | 1 <sup>1)</sup> | 1049                    | 944  | 420   | 157                     | 142  | 63    |
| TRJE157*016#RJ                          | E         | 150              | 16                | 16            | 6         | 300                   | 1 <sup>1)</sup> | 742                     | 667  | 297   | 222                     | 200  | 89    |
| TRJE157*016#0150                        | E         | 150              | 16                | 16            | 6         | 150                   | 1 <sup>1)</sup> | 1049                    | 944  | 420   | 157                     | 142  | 63    |
| <b>20 Volt @ 85°C (13 Volt @ 125°C)</b> |           |                  |                   |               |           |                       |                 |                         |      |       |                         |      |       |
| TRJA105*020#RJ                          | A         | 1                | 20                | 0.30          | 4         | 6630                  | 1               | 106                     | 96   | 43    | 705                     | 635  | 282   |
| TRJA105*020#3000                        | A         | 1                | 20                | 0.30          | 4         | 3000                  | 1               | 158                     | 142  | 63    | 474                     | 427  | 190   |
| TRJA155*020#RJ                          | A         | 1.5              | 20                | 0.30          | 6         | 5460                  | 1               | 117                     | 105  | 47    | 640                     | 576  | 256   |
| TRJA155*020#3000                        | A         | 1.5              | 20                | 0.30          | 6         | 3000                  | 1               | 158                     | 142  | 63    | 474                     | 427  | 190   |
| TRJA225*020#RJ                          | A         | 2.2              | 20                | 0.33          | 6         | 4550                  | 1               | 128                     | 116  | 51    | 584                     | 526  | 234   |
| TRJA225*020#3000                        | A         | 2.2              | 20                | 0.33          | 6         | 3000                  | 1               | 158                     | 142  | 63    | 474                     | 427  | 190   |
| TRJA335*020#RJ                          | A         | 3.3              | 20                | 0.50          | 6         | 3740                  | 1               | 142                     | 127  | 57    | 530                     | 477  | 212   |
| TRJA335*020#2500                        | A         | 3.3              | 20                | 0.50          | 6         | 2500                  | 1               | 173                     | 156  | 69    | 433                     | 390  | 173   |
| TRJB335*020#RJ                          | B         | 3.3              | 20                | 0.50          | 6         | 3740                  | 1               | 151                     | 136  | 60    | 564                     | 507  | 226   |
| TRJB335*020#1300                        | B         | 3.3              | 20                | 0.50          | 6         | 1300                  | 1               | 256                     | 230  | 102   | 332                     | 299  | 133   |
| TRJA475*020#RJ                          | A         | 4.7              | 20                | 0.71          | 5         | 2500                  | 1               | 184                     | 166  | 74    | 461                     | 415  | 184   |
| TRJA475*020#1800                        | A         | 4.7              | 20                | 0.71          | 5         | 1800                  | 1               | 217                     | 196  | 87    | 391                     | 352  | 156   |
| TRJB475*020#RJ                          | B         | 4.7              | 20                | 0.71          | 6         | 3160                  | 1               | 164                     | 148  | 66    | 518                     | 466  | 207   |
| TRJB475*020#1000                        | B         | 4.7              | 20                | 0.71          | 6         | 1000                  | 1               | 292                     | 262  | 117   | 292                     | 262  | 117   |
| TRJB685*020#RJ                          | B         | 6.8              | 20                | 1.0           | 6         | 2650                  | 1               | 179                     | 161  | 72    | 475                     | 427  | 190   |
| TRJB685*020#1000                        | B         | 6.8              | 20                | 1.0           | 6         | 1000                  | 1               | 292                     | 262  | 117   | 292                     | 262  | 117   |
| TRJC685*020#RJ                          | C         | 6.8              | 20                | 1.0           | 6         | 2000                  | 1               | 235                     | 211  | 94    | 469                     | 422  | 188   |
| TRJB106*020#RJ                          | B         | 10               | 20                | 1.5           | 6         | 2200                  | 1               | 197                     | 177  | 79    | 432                     | 389  | 173   |

1<sup>1)</sup> Dry pack option (see How to order) recommended for reduction of stress during soldering. Dry pack parts should be treated as MSL 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, 0.5V RMS with a maximum DC bias of 2.2 volts.  
DCL is measured at rated voltage after 5 minutes.

The EIA & CECC standards for low ESR Solid Tantalum Capacitors allow an ESR movement to 1.25 times catalogue limit post mounting.  
For typical weight and composition see page 120.  
**NOTE: AVX reserves the right to supply a higher voltage rating or tighter tolerance part in the same case size, to the same reliability standards.**

### RATINGS & PART NUMBER REFERENCE

| AVX Part No.                     | Case Size | Capacitance (μF) | Rated Voltage (V) | DCL (μA) Max. | DF % Max. | ESR Max. (mΩ) @100kHz | MSL             | 100kHz RMS Current (mA) |      |       | 100kHz RMS Voltage (mV) |      |       |
|----------------------------------|-----------|------------------|-------------------|---------------|-----------|-----------------------|-----------------|-------------------------|------|-------|-------------------------|------|-------|
|                                  |           |                  |                   |               |           |                       |                 | 25°C                    | 85°C | 125°C | 25°C                    | 85°C | 125°C |
| TRJB106*020#1000                 | B         | 10               | 20                | 1.5           | 6         | 1000                  | 1               | 292                     | 262  | 117   | 292                     | 262  | 117   |
| TRJC106*020#RJ                   | C         | 10               | 20                | 1.5           | 6         | 800                   | 1               | 371                     | 334  | 148   | 297                     | 267  | 119   |
| TRJC106*020#0500                 | C         | 10               | 20                | 1.5           | 6         | 500                   | 1               | 469                     | 422  | 188   | 235                     | 211  | 94    |
| TRJB156*020#RJ                   | B         | 15               | 20                | 2.3           | 6         | 1400                  | 1               | 280                     | 252  | 112   | 392                     | 353  | 157   |
| TRJB156*020#0500                 | B         | 15               | 20                | 2.3           | 6         | 500                   | 1               | 469                     | 422  | 188   | 235                     | 211  | 94    |
| TRJC156*020#RJ                   | C         | 15               | 20                | 2.3           | 6         | 720                   | 1               | 391                     | 352  | 156   | 281                     | 253  | 113   |
| TRJC156*020#0400                 | C         | 15               | 20                | 2.3           | 6         | 400                   | 1               | 524                     | 472  | 210   | 210                     | 189  | 84    |
| TRJD156*020#RJ                   | D         | 15               | 20                | 2.3           | 6         | 1100                  | 1               | 369                     | 332  | 148   | 406                     | 366  | 162   |
| TRJC226*020#RJ                   | C         | 22               | 20                | 3.3           | 6         | 650                   | 1               | 411                     | 370  | 165   | 267                     | 241  | 107   |
| TRJC226*020#0400                 | C         | 22               | 20                | 3.3           | 6         | 400                   | 1               | 524                     | 472  | 210   | 210                     | 189  | 84    |
| TRJD226*020#RJ                   | D         | 22               | 20                | 3.3           | 6         | 650                   | 1               | 480                     | 432  | 192   | 312                     | 281  | 125   |
| TRJD226*020#0150                 | D         | 22               | 20                | 3.3           | 6         | 150                   | 1               | 1000                    | 900  | 400   | 150                     | 135  | 60    |
| TRJD226*020#0300                 | D         | 22               | 20                | 3.3           | 6         | 300                   | 1               | 707                     | 636  | 283   | 212                     | 191  | 85    |
| TRJC336*020#RJ                   | C         | 33               | 20                | 5.0           | 6         | 590                   | 1               | 432                     | 389  | 173   | 255                     | 229  | 102   |
| TRJC336*020#0300                 | C         | 33               | 20                | 5.0           | 6         | 300                   | 1               | 606                     | 545  | 242   | 182                     | 163  | 73    |
| TRJD336*020#RJ                   | D         | 33               | 20                | 5.0           | 6         | 590                   | 1               | 504                     | 454  | 202   | 297                     | 268  | 119   |
| TRJD336*020#0250                 | D         | 33               | 20                | 5.0           | 6         | 250                   | 1               | 775                     | 697  | 310   | 194                     | 174  | 77    |
| TRJD476*020#RJ                   | D         | 47               | 20                | 7.1           | 6         | 540                   | 1               | 527                     | 474  | 211   | 285                     | 256  | 114   |
| TRJD476*020#0200                 | D         | 47               | 20                | 7.1           | 6         | 200                   | 1               | 866                     | 779  | 346   | 173                     | 156  | 69    |
| TRJD686*020#RJ                   | D         | 68               | 20                | 10            | 6         | 490                   | 1               | 553                     | 498  | 221   | 271                     | 244  | 108   |
| TRJD686*020#0200                 | D         | 68               | 20                | 10            | 6         | 200                   | 1               | 866                     | 779  | 346   | 173                     | 156  | 69    |
| TRJE686*020#RJ                   | E         | 68               | 20                | 10            | 6         | 490                   | 1 <sup>1)</sup> | 580                     | 522  | 232   | 284                     | 256  | 114   |
| TRJE686*020#0120                 | E         | 68               | 20                | 10            | 6         | 120                   | 1 <sup>1)</sup> | 1173                    | 1055 | 469   | 141                     | 127  | 56    |
| TRJE686*020#0200                 | E         | 68               | 20                | 10            | 6         | 200                   | 1 <sup>1)</sup> | 908                     | 817  | 363   | 182                     | 163  | 73    |
| TRJE107*020#RJ                   | E         | 100              | 20                | 15            | 6         | 300                   | 1 <sup>1)</sup> | 742                     | 667  | 297   | 222                     | 200  | 89    |
| TRJE107*020#0150                 | E         | 100              | 20                | 15            | 6         | 150                   | 1 <sup>1)</sup> | 1049                    | 944  | 420   | 157                     | 142  | 63    |
| 25 Volt @ 85°C (17 Volt @ 125°C) |           |                  |                   |               |           |                       |                 |                         |      |       |                         |      |       |
| TRJA474*025#RJ                   | A         | 0.47             | 25                | 0.30          | 4         | 9530                  | 1               | 89                      | 80   | 35    | 845                     | 761  | 338   |
| TRJA474*025#7000                 | A         | 0.47             | 25                | 0.30          | 4         | 7000                  | 1               | 104                     | 93   | 41    | 725                     | 652  | 290   |
| TRJA684*025#RJ                   | A         | 0.68             | 25                | 0.30          | 4         | 7980                  | 1               | 97                      | 87   | 39    | 774                     | 696  | 309   |
| TRJA684*025#6000                 | A         | 0.68             | 25                | 0.30          | 4         | 6000                  | 1               | 112                     | 101  | 45    | 671                     | 604  | 268   |
| TRJA105*025#RJ                   | A         | 1                | 25                | 0.30          | 4         | 6630                  | 1               | 106                     | 96   | 43    | 705                     | 635  | 282   |
| TRJA105*025#3000                 | A         | 1                | 25                | 0.30          | 4         | 3000                  | 1               | 158                     | 142  | 63    | 474                     | 427  | 190   |
| TRJA155*025#RJ                   | A         | 1.5              | 25                | 0.30          | 6         | 5460                  | 1               | 117                     | 105  | 47    | 640                     | 576  | 256   |
| TRJA155*025#3000                 | A         | 1.5              | 25                | 0.30          | 6         | 3000                  | 1               | 158                     | 142  | 63    | 474                     | 427  | 190   |
| TRJB155*025#RJ                   | B         | 1.5              | 25                | 0.30          | 6         | 5000                  | 1               | 130                     | 117  | 52    | 652                     | 587  | 261   |
| TRJA225*025#RJ                   | A         | 2.2              | 25                | 0.41          | 6         | 2900                  | 1               | 161                     | 145  | 64    | 466                     | 420  | 187   |
| TRJA225*025#1600                 | A         | 2.2              | 25                | 0.41          | 6         | 1600                  | 1               | 217                     | 195  | 87    | 346                     | 312  | 139   |
| TRJB225*025#RJ                   | B         | 2.2              | 25                | 0.41          | 6         | 4550                  | 1               | 137                     | 123  | 55    | 622                     | 560  | 249   |
| TRJB225*025#1200                 | B         | 2.2              | 25                | 0.41          | 6         | 1200                  | 1               | 266                     | 240  | 106   | 319                     | 287  | 128   |
| TRJB335*025#RJ                   | B         | 3.3              | 25                | 0.62          | 6         | 3740                  | 1               | 151                     | 136  | 60    | 564                     | 507  | 226   |
| TRJB335*025#2000                 | B         | 3.3              | 25                | 0.62          | 6         | 2000                  | 1               | 206                     | 186  | 82    | 412                     | 371  | 165   |
| TRJB475*025#RJ                   | B         | 4.7              | 25                | 0.88          | 6         | 3160                  | 1               | 164                     | 148  | 66    | 518                     | 466  | 207   |
| TRJB475*025#1000                 | B         | 4.7              | 25                | 0.88          | 6         | 1000                  | 1               | 292                     | 262  | 117   | 292                     | 262  | 117   |
| TRJB685*025#RJ                   | B         | 6.8              | 25                | 1.30          | 6         | 1500                  | 1               | 238                     | 214  | 95    | 357                     | 321  | 143   |
| TRJB685*025#1000                 | B         | 6.8              | 25                | 1.30          | 6         | 1000                  | 1               | 292                     | 262  | 117   | 292                     | 262  | 117   |
| TRJC685*025#RJ                   | C         | 6.8              | 25                | 1.3           | 6         | 1070                  | 1               | 321                     | 289  | 128   | 343                     | 309  | 137   |
| TRJC685*025#0600                 | C         | 6.8              | 25                | 1.3           | 6         | 600                   | 1               | 428                     | 385  | 171   | 257                     | 231  | 103   |
| TRJC106*025#RJ                   | C         | 10               | 25                | 1.9           | 6         | 800                   | 1               | 371                     | 334  | 148   | 297                     | 267  | 119   |
| TRJC106*025#0600                 | C         | 10               | 25                | 1.9           | 6         | 600                   | 1               | 428                     | 385  | 171   | 257                     | 231  | 103   |
| TRJD106*025#RJ                   | D         | 10               | 25                | 1.9           | 6         | 1200                  | 1               | 354                     | 318  | 141   | 424                     | 382  | 170   |
| TRJC156*025#RJ                   | C         | 15               | 25                | 2.8           | 6         | 720                   | 1               | 391                     | 352  | 156   | 281                     | 253  | 113   |
| TRJC156*025#0500                 | C         | 15               | 25                | 2.8           | 6         | 500                   | 1               | 469                     | 422  | 188   | 235                     | 211  | 94    |
| TRJD156*025#RJ                   | D         | 15               | 25                | 2.8           | 6         | 720                   | 1               | 456                     | 411  | 183   | 329                     | 296  | 131   |
| TRJD156*025#0300                 | D         | 15               | 25                | 2.8           | 6         | 300                   | 1               | 707                     | 636  | 283   | 212                     | 191  | 85    |
| TRJD226*025#RJ                   | D         | 22               | 25                | 4.1           | 6         | 650                   | 1               | 480                     | 432  | 192   | 312                     | 281  | 125   |
| TRJD226*025#0300                 | D         | 22               | 25                | 4.1           | 6         | 300                   | 1               | 707                     | 636  | 283   | 212                     | 191  | 85    |
| TRJD336*025#RJ                   | D         | 33               | 25                | 6.2           | 6         | 590                   | 1               | 504                     | 454  | 202   | 297                     | 268  | 119   |
| TRJD336*025#0400                 | D         | 33               | 25                | 6.2           | 6         | 400                   | 1               | 612                     | 551  | 245   | 245                     | 220  | 98    |
| TRJD476*025#RJ                   | D         | 47               | 25                | 8.8           | 6         | 540                   | 1               | 527                     | 474  | 211   | 285                     | 256  | 114   |
| TRJD476*025#0250                 | D         | 47               | 25                | 8.8           | 6         | 250                   | 1               | 775                     | 697  | 310   | 194                     | 174  | 77    |
| TRJE476*025#RJ                   | E         | 47               | 25                | 8.8           | 6         | 540                   | 1 <sup>1)</sup> | 553                     | 497  | 221   | 298                     | 269  | 119   |
| TRJE476*025#0150                 | E         | 47               | 25                | 8.8           | 6         | 150                   | 1 <sup>1)</sup> | 1049                    | 944  | 420   | 157                     | 142  | 63    |
| 35 Volt @ 85°C (23 Volt @ 125°C) |           |                  |                   |               |           |                       |                 |                         |      |       |                         |      |       |
| TRJA104*035#RJ                   | A         | 0.1              | 35                | 0.30          | 4         | 20000                 | 1               | 61                      | 55   | 24    | 1225                    | 1102 | 490   |
| TRJA154*035#RJ                   | A         | 0.15             | 35                | 0.30          | 4         | 16470                 | 1               | 67                      | 61   | 27    | 1111                    | 1000 | 445   |
| TRJA154*035#6000                 | A         | 0.15             | 35                | 0.30          | 4         | 6000                  | 1               | 112                     | 101  | 45    | 671                     | 604  | 268   |
| TRJA224*035#RJ                   | A         | 0.22             | 35                | 0.30          | 4         | 13710                 | 1               | 74                      | 67   | 30    | 1014                    | 913  | 406   |
| TRJA224*035#6000                 | A         | 0.22             | 35                | 0.30          | 4         | 6000                  | 1               | 112                     | 101  | 45    | 671                     | 604  | 268   |
| TRJA334*035#RJ                   | A         | 0.33             | 35                | 0.30          | 4         | 11280                 | 1               | 82                      | 73   | 33    | 920                     | 828  | 368   |
| TRJA334*035#6000                 | A         | 0.33             | 35                | 0.30          | 4         | 6000                  | 1               | 112                     | 101  | 45    | 671                     | 604  | 268   |

<sup>1)</sup> Dry pack option (see How to order) recommended for reduction of stress during soldering. Dry pack parts should be treated as MSL 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, 0.5V RMS with a maximum DC bias of 2.2 volts. DCL is measured at rated voltage after 5 minutes.

The EIA & CECC standards for low ESR Solid Tantalum Capacitors allow an ESR movement to 1.25 times catalogue limit post mounting.

For typical weight and composition see page 120.

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



### RATINGS & PART NUMBER REFERENCE

| AVX Part No.                     | Case Size | Capacitance (μF) | Rated Voltage (V) | DCL (μA) Max. | DF % Max. | ESR Max. (mΩ) @100kHz | MSL             | 100kHz RMS Current (mA) |      |       | 100kHz RMS Voltage (mV) |      |       |
|----------------------------------|-----------|------------------|-------------------|---------------|-----------|-----------------------|-----------------|-------------------------|------|-------|-------------------------|------|-------|
|                                  |           |                  |                   |               |           |                       |                 | 25°C                    | 85°C | 125°C | 25°C                    | 85°C | 125°C |
| TRJA474*035#RJ                   | A         | 0.47             | 35                | 0.30          | 4         | 9530                  | 1               | 89                      | 80   | 35    | 845                     | 761  | 338   |
| TRJA474*035#4000                 | A         | 0.47             | 35                | 0.30          | 4         | 4000                  | 1               | 137                     | 123  | 55    | 548                     | 493  | 219   |
| TRJA684*035#RJ                   | A         | 0.68             | 35                | 0.30          | 4         | 7980                  | 1               | 97                      | 87   | 39    | 774                     | 696  | 309   |
| TRJA684*035#6000                 | A         | 0.68             | 35                | 0.30          | 4         | 6000                  | 1               | 112                     | 101  | 45    | 671                     | 604  | 268   |
| TRJA105*035#RJ                   | A         | 1                | 35                | 0.30          | 4         | 6630                  | 1               | 106                     | 96   | 43    | 705                     | 635  | 282   |
| TRJA105*035#3000                 | A         | 1                | 35                | 0.30          | 4         | 3000                  | 1               | 158                     | 142  | 63    | 474                     | 427  | 190   |
| TRJB105*035#RJ                   | B         | 1                | 35                | 0.30          | 4         | 3400                  | 1               | 158                     | 142  | 63    | 538                     | 484  | 215   |
| TRJB105*035#2000                 | B         | 1                | 35                | 0.30          | 4         | 2000                  | 1               | 206                     | 186  | 82    | 412                     | 371  | 165   |
| TRJA155*035#RJ                   | A         | 1.5              | 35                | 0.39          | 6         | 3100                  | 1               | 166                     | 149  | 66    | 513                     | 462  | 205   |
| TRJA155*035#2000                 | A         | 1.5              | 35                | 0.39          | 6         | 2000                  | 1               | 206                     | 186  | 82    | 412                     | 371  | 165   |
| TRJB155*035#RJ                   | B         | 1.5              | 35                | 0.39          | 6         | 5460                  | 1               | 125                     | 112  | 50    | 681                     | 613  | 272   |
| TRJB155*035#2500                 | B         | 1.5              | 35                | 0.39          | 6         | 2500                  | 1               | 184                     | 166  | 74    | 461                     | 415  | 184   |
| TRJB225*035#RJ                   | B         | 2.2              | 35                | 0.58          | 6         | 4550                  | 1               | 137                     | 123  | 55    | 622                     | 560  | 249   |
| TRJB225*035#2000                 | B         | 2.2              | 35                | 0.58          | 6         | 2000                  | 1               | 206                     | 186  | 82    | 412                     | 371  | 165   |
| TRJB335*035#RJ                   | B         | 3.3              | 35                | 0.87          | 6         | 3740                  | 1               | 151                     | 136  | 60    | 564                     | 507  | 226   |
| TRJB335*035#1000                 | B         | 3.3              | 35                | 0.87          | 6         | 1000                  | 1               | 292                     | 262  | 117   | 292                     | 262  | 117   |
| TRJC335*035#RJ                   | C         | 3.3              | 35                | 0.87          | 6         | 1840                  | 1               | 245                     | 220  | 98    | 450                     | 405  | 180   |
| TRJC335*035#0800                 | C         | 3.3              | 35                | 0.87          | 6         | 800                   | 1               | 371                     | 334  | 148   | 297                     | 267  | 119   |
| TRJD335*035#RJ                   | D         | 3.3              | 35                | 0.87          | 6         | 2000                  | 1               | 274                     | 246  | 110   | 548                     | 493  | 219   |
| TRJB475*035#RJ                   | B         | 4.7              | 35                | 1.20          | 6         | 2200                  | 1               | 224                     | 201  | 89    | 492                     | 443  | 197   |
| TRJB475*035#1500                 | B         | 4.7              | 35                | 1.20          | 6         | 1500                  | 1               | 271                     | 244  | 108   | 406                     | 366  | 162   |
| TRJC475*035#RJ                   | C         | 4.7              | 35                | 1.2           | 6         | 1410                  | 1               | 279                     | 251  | 112   | 394                     | 354  | 158   |
| TRJC475*035#0600                 | C         | 4.7              | 35                | 1.2           | 6         | 600                   | 1               | 428                     | 385  | 171   | 257                     | 231  | 103   |
| TRJD475*035#RJ                   | D         | 4.7              | 35                | 1.2           | 6         | 1500                  | 1               | 316                     | 285  | 126   | 474                     | 427  | 190   |
| TRJC685*035#RJ                   | C         | 6.8              | 35                | 1.8           | 6         | 1070                  | 1               | 321                     | 289  | 128   | 343                     | 309  | 137   |
| TRJC685*035#0600                 | C         | 6.8              | 35                | 1.8           | 6         | 600                   | 1               | 428                     | 385  | 171   | 257                     | 231  | 103   |
| TRJD685*035#RJ                   | D         | 6.8              | 35                | 1.8           | 6         | 1300                  | 1               | 340                     | 306  | 136   | 442                     | 397  | 177   |
| TRJC106*035#RJ                   | C         | 10               | 35                | 2.6           | 6         | 800                   | 1               | 371                     | 334  | 148   | 297                     | 267  | 119   |
| TRJC106*035#0600                 | C         | 10               | 35                | 2.6           | 6         | 600                   | 1               | 428                     | 385  | 171   | 257                     | 231  | 103   |
| TRJD106*035#RJ                   | D         | 10               | 35                | 2.6           | 6         | 800                   | 1               | 433                     | 390  | 173   | 346                     | 312  | 139   |
| TRJD106*035#0250                 | D         | 10               | 35                | 2.6           | 6         | 250                   | 1               | 775                     | 697  | 310   | 194                     | 174  | 77    |
| TRJD106*035#0400                 | D         | 10               | 35                | 2.6           | 6         | 400                   | 1               | 612                     | 551  | 245   | 245                     | 220  | 98    |
| TRJD156*035#RJ                   | D         | 15               | 35                | 3.9           | 6         | 720                   | 1               | 456                     | 411  | 183   | 329                     | 296  | 131   |
| TRJD156*035#0225                 | D         | 15               | 35                | 3.9           | 6         | 225                   | 1               | 816                     | 735  | 327   | 184                     | 165  | 73    |
| TRJD226*035#RJ                   | D         | 22               | 35                | 5.8           | 6         | 650                   | 1               | 480                     | 432  | 192   | 312                     | 281  | 125   |
| TRJD226*035#0200                 | D         | 22               | 35                | 5.8           | 6         | 200                   | 1               | 866                     | 779  | 346   | 173                     | 156  | 69    |
| TRJD226*035#0400                 | D         | 22               | 35                | 5.8           | 6         | 400                   | 1               | 612                     | 551  | 245   | 245                     | 220  | 98    |
| TRJE336*035#RJ                   | E         | 33               | 35                | 8.7           | 6         | 590                   | 1 <sup>1)</sup> | 529                     | 476  | 212   | 312                     | 281  | 125   |
| TRJE336*035#0250                 | E         | 33               | 35                | 8.7           | 6         | 250                   | 1 <sup>1)</sup> | 812                     | 731  | 325   | 203                     | 183  | 81    |
| 50 Volt @ 85°C (33 Volt @ 125°C) |           |                  |                   |               |           |                       |                 |                         |      |       |                         |      |       |
| TRJA224*050#RJ                   | A         | 0.22             | 50                | 0.3           | 4         | 7500                  | 1               | 100                     | 90   | 40    | 750                     | 675  | 300   |
| TRJA224*050#7000                 | A         | 0.22             | 50                | 0.3           | 4         | 7000                  | 1               | 104                     | 93   | 41    | 725                     | 652  | 290   |
| TRJA334*050#RJ                   | A         | 0.33             | 50                | 0.3           | 4         | 7000                  | 1               | 104                     | 93   | 41    | 725                     | 652  | 290   |
| TRJB474*050#RJ                   | B         | 0.47             | 50                | 0.3           | 4         | 5000                  | 1               | 130                     | 117  | 52    | 652                     | 587  | 261   |
| TRJB684*050#RJ                   | B         | 0.68             | 50                | 0.3           | 4         | 4000                  | 1               | 146                     | 131  | 58    | 583                     | 525  | 233   |
| TRJB684*050#2000                 | B         | 0.68             | 50                | 0.3           | 4         | 2000                  | 1               | 206                     | 186  | 82    | 412                     | 371  | 165   |
| TRJB105*050#RJ                   | B         | 1                | 50                | 0.4           | 4         | 3400                  | 1               | 158                     | 142  | 63    | 538                     | 484  | 215   |
| TRJB105*050#2000                 | B         | 1                | 50                | 0.4           | 4         | 2000                  | 1               | 206                     | 186  | 82    | 412                     | 371  | 165   |
| TRJC105*050#RJ                   | C         | 1                | 50                | 0.4           | 4         | 3000                  | 1               | 191                     | 172  | 77    | 574                     | 517  | 230   |
| TRJC155*050#RJ                   | C         | 1.5              | 50                | 0.6           | 6         | 2500                  | 1               | 210                     | 189  | 84    | 524                     | 472  | 210   |
| TRJC155*050#1500                 | C         | 1.5              | 50                | 0.6           | 6         | 1500                  | 1               | 271                     | 244  | 108   | 406                     | 366  | 162   |
| TRJC225*050#RJ                   | C         | 2.2              | 50                | 0.8           | 6         | 1700                  | 1               | 254                     | 229  | 102   | 432                     | 389  | 173   |
| TRJC225*050#1000                 | C         | 2.2              | 50                | 0.8           | 6         | 1000                  | 1               | 332                     | 298  | 133   | 332                     | 298  | 133   |
| TRJD225*050#RJ                   | D         | 2.2              | 50                | 0.8           | 4.5       | 2000                  | 1               | 274                     | 246  | 110   | 548                     | 493  | 219   |
| TRJD225*050#1200                 | D         | 2.2              | 50                | 0.8           | 4.5       | 1200                  | 1               | 354                     | 318  | 141   | 424                     | 382  | 170   |
| TRJC335*050#RJ                   | C         | 3.3              | 50                | 1.2           | 6         | 1400                  | 1               | 280                     | 252  | 112   | 392                     | 353  | 157   |
| TRJC335*050#1000                 | C         | 3.3              | 50                | 1.2           | 6         | 1000                  | 1               | 332                     | 298  | 133   | 332                     | 298  | 133   |
| TRJD335*050#RJ                   | D         | 3.3              | 50                | 1.20          | 4.5       | 1100                  | 1               | 369                     | 332  | 148   | 406                     | 366  | 162   |
| TRJD335*050#0800                 | D         | 3.3              | 50                | 1.20          | 4.5       | 800                   | 1               | 433                     | 390  | 173   | 346                     | 312  | 139   |
| TRJD475*050#RJ                   | D         | 4.7              | 50                | 1.80          | 4.5       | 900                   | 1               | 408                     | 367  | 163   | 367                     | 331  | 147   |
| TRJD475*050#0600                 | D         | 4.7              | 50                | 1.80          | 4.5       | 600                   | 1               | 500                     | 450  | 200   | 300                     | 270  | 120   |
| TRJD685*050#RJ                   | D         | 6.8              | 50                | 2.60          | 4.5       | 700                   | 1               | 463                     | 417  | 185   | 324                     | 292  | 130   |
| TRJE106*050#RJ                   | E         | 10               | 50                | 3.80          | 4.5       | 700                   | 1 <sup>1)</sup> | 486                     | 437  | 194   | 340                     | 306  | 136   |
| TRJE106*050#0300                 | E         | 10               | 50                | 3.80          | 4.5       | 300                   | 1 <sup>1)</sup> | 742                     | 667  | 297   | 222                     | 200  | 89    |
| TRJE106*050#0400                 | E         | 10               | 50                | 3.80          | 4.5       | 400                   | 1 <sup>1)</sup> | 642                     | 578  | 257   | 257                     | 231  | 103   |

<sup>1)</sup> Dry pack option (see How to order) recommended for reduction of stress during soldering. Dry pack parts should be treated as MSL 3.

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For typical weight and composition see page 120.

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- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



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