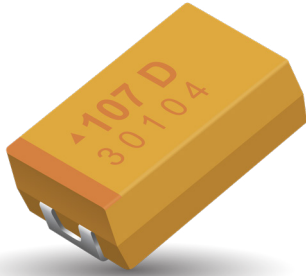


# TAJ Automotive Range

## Standard Tantalum - Automotive Product Range



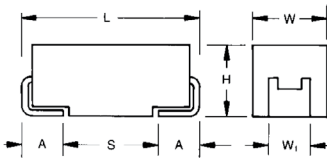
### FEATURES

- General Purpose SMT Chip Tantalum Series
- 100% Surge Current Tested
- 7 Case Sizes Available
- CV Range: 0.22-680 $\mu$ F / 6.3-50V



### APPLICATIONS

- Audio Systems
- GPS
- Seat Controls
- Dashboard



### CASE DIMENSIONS:

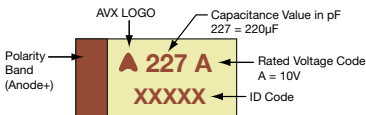
millimeters (inches)

| 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) |
| P    | 0805     | 2012-15    | 2.05 (0.081)         | 1.35 (0.053)                       | 1.50 (0.059) max.                  | 1.00 $\pm$ 0.10 (0.039 $\pm$ 0.004) | 0.50 (0.020)                       | 0.85 (0.033) |
| Y    | 2917     | 7343-20    | 7.30 (0.287)         | 4.30 (0.169)                       | 2.00 (0.079)                       | 2.40 (0.094)                        | 1.30 (0.051)                       | 4.40 (0.173) |

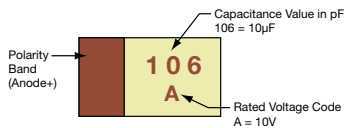
W<sub>1</sub> dimension applies to the termination width for A dimensional area only.

### MARKING

#### A, B, C, D, E, Y CASE



#### P CASE



### HOW TO ORDER

| TAJ  | C                            | 106                                                                                                                                    | M                                           | 035                                                                           | T                                                                          | NJ                                      | V                                               |
|------|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|-------------------------------------------------------------------------------|----------------------------------------------------------------------------|-----------------------------------------|-------------------------------------------------|
| 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 = $\pm$ 10%<br>M = $\pm$ 20% | Rated DC Voltage<br>006 = 6.3Vdc<br>010 = 10Vdc<br>016 = 16Vdc<br>020 = 20Vdc | Packaging<br>Automotive Lead Free 7" Reel<br>Automotive Lead Free 13" Reel | Specification Suffix<br>NJ = Std Suffix | Dry Pack Option<br>(D,E,Y case sizes mandatory) |

### TECHNICAL SPECIFICATIONS

|                                    |                |                                                                                                       |    |    |    |    |    |    |  |
|------------------------------------|----------------|-------------------------------------------------------------------------------------------------------|----|----|----|----|----|----|--|
| Technical Data:                    |                | All technical data relate to an ambient temperature of +25°C                                          |    |    |    |    |    |    |  |
| Capacitance Range:                 |                | 0.22 $\mu$ F to 680 $\mu$ F                                                                           |    |    |    |    |    |    |  |
| Capacitance Tolerance:             |                | $\pm$ 10%; $\pm$ 20%                                                                                  |    |    |    |    |    |    |  |
| Rated Voltage (V <sub>R</sub> )    | $\leq$ +85°C:  | 6.3                                                                                                   | 10 | 16 | 20 | 25 | 35 | 50 |  |
| Category Voltage (V <sub>C</sub> ) | $\leq$ +125°C: | 4                                                                                                     | 7  | 10 | 13 | 17 | 23 | 33 |  |
| Surge Voltage (V <sub>S</sub> )    | $\leq$ +85°C:  | 8                                                                                                     | 13 | 20 | 26 | 32 | 46 | 65 |  |
| Surge Voltage (V <sub>S</sub> )    | $\leq$ +125°C: | 5                                                                                                     | 8  | 13 | 16 | 20 | 28 | 40 |  |
| Temperature Range:                 |                | -55°C to +125°C                                                                                       |    |    |    |    |    |    |  |
| Environmental Classification:      |                | 55/125/56 (IEC 68-2)                                                                                  |    |    |    |    |    |    |  |
| Reliability:                       |                | 1% per 1000 hours at 85°C, V <sub>R</sub> with 0.1 $\Omega$ /V series impedance, 60% confidence level |    |    |    |    |    |    |  |
| Termination Finished:              |                | Sn Plating (standard), Gold and SnPb Plating upon request                                             |    |    |    |    |    |    |  |
|                                    |                | Meets requirements of AEC-Q200                                                                        |    |    |    |    |    |    |  |

# TAJ Automotive Range

## Standard Tantalum - Automotive Product Range

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

| Capacitance |      | Rated voltage DC ( $V_R$ to 85°C) |         |         |         |         |         |         |
|-------------|------|-----------------------------------|---------|---------|---------|---------|---------|---------|
| µF          | Code | 6.3V (J)                          | 10V (A) | 16V (C) | 20V (D) | 25V (E) | 35V (V) | 50V (T) |
| 0.10        | 104  |                                   |         |         |         |         |         |         |
| 0.15        | 154  |                                   |         |         |         |         |         |         |
| 0.22        | 224  |                                   |         |         |         |         |         | A       |
| 0.33        | 334  |                                   |         |         |         |         | A       | A       |
| 0.47        | 474  |                                   |         |         |         | A       | A       | A/B     |
| 0.68        | 684  |                                   |         |         |         | A       | A       | B       |
| 1.0         | 105  |                                   |         | A       | A       | A       | A/B     | B/C     |
| 1.5         | 155  |                                   |         | A       | A       | A/B     | A/B     | C       |
| 2.2         | 225  |                                   | A       | A       | A/B     | A/B     | B/C     | C/D     |
| 3.3         | 335  | A                                 |         | A/B     | A/B     | A/B     | B/C     | C/D     |
| 4.7         | 475  |                                   | A/B     | A/B     | A/B     | B/C     | B/C/D   | C/D     |
| 6.8         | 685  |                                   | A/B     | A/B     | A/B/C   | B/C     | C/D     | D       |
| 10          | 106  | A/B                               | A/B/P   | A/B/C   | B/C     | B/C/D   | C/D/Y   | D/E     |
| 15          | 156  | A/P                               | A/B/C   | B/C     | B/C     | C/D/Y   | D/Y     | E       |
| 22          | 226  | A/B/C                             | A/B/C   | B/C/D   | B/C/D/Y | C/D/Y   | D/E     |         |
| 33          | 336  | A/B                               | B/C     | B/C/D/Y | C/D/Y   | D       | D/E     |         |
| 47          | 476  | A/B/C                             | B/C/D   | C/D/Y   | D/Y     | D/E     | E       |         |
| 68          | 686  | B/C                               | B/C/D/Y | C/D/Y   | D/E     | E       |         |         |
| 100         | 107  | B/C/D/Y                           | C/D/Y   | D/E     | E       | E       |         |         |
| 150         | 157  | C/D/Y                             | D/E/Y   | D/E     |         |         |         |         |
| 220         | 227  | C/D/Y                             | D/E     | E       |         |         |         |         |
| 330         | 337  | D/E                               | D/E     |         |         |         |         |         |
| 470         | 477  | D/E                               |         |         |         |         |         |         |
| 680         | 687  | D/E                               |         |         |         |         |         |         |

#### Released ratings

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.

# TAJ Automotive Range

## Standard Tantalum - Automotive Product Range



### RATINGS & PART NUMBER REFERENCE

| Part Number     | Case Size | Capacitance (µF) | Rated Voltage (V) | Rated Temperature (°C) | Category Voltage (V) | Category Temperature (°C) | DCL Max. (µA) | DF Max. (%) | ESR Max. @ 100kHz (Ω) | 100kHz RMS Current (mA) |      |       | MSL |
|-----------------|-----------|------------------|-------------------|------------------------|----------------------|---------------------------|---------------|-------------|-----------------------|-------------------------|------|-------|-----|
|                 |           |                  |                   |                        |                      |                           |               |             |                       | 25°C                    | 85°C | 125°C |     |
| 6.3 Volt @ 85°C |           |                  |                   |                        |                      |                           |               |             |                       |                         |      |       |     |
| TAJA335*006TNJ  | A         | 3.3              | 6.3               | 85                     | 4                    | 125                       | 0.5           | 6           | 7                     | 104                     | 93   | 41    | 1   |
| TAJA106*006TNJ  | A         | 10               | 6.3               | 85                     | 4                    | 125                       | 0.6           | 6           | 4                     | 137                     | 123  | 55    | 1   |
| TAJB106*006TNJ  | B         | 10               | 6.3               | 85                     | 4                    | 125                       | 0.5           | 6           | 3                     | 168                     | 151  | 67    | 1   |
| TAJA156*006TNJ  | A         | 15               | 6.3               | 85                     | 4                    | 125                       | 0.9           | 6           | 3.5                   | 146                     | 132  | 59    | 1   |
| TAJP156*006TNJ  | P         | 15               | 6.3               | 85                     | 4                    | 125                       | 0.9           | 8           | 3.5                   | 131                     | 118  | 52    | 1   |
| TAJA226*006TNJ  | A         | 22               | 6.3               | 85                     | 4                    | 125                       | 1.4           | 6           | 3                     | 158                     | 142  | 63    | 1   |
| TAJB226*006TNJ  | B         | 22               | 6.3               | 85                     | 4                    | 125                       | 1.4           | 6           | 2.5                   | 184                     | 166  | 74    | 1   |
| TAJC226*006TNJ  | C         | 22               | 6.3               | 85                     | 4                    | 125                       | 1.4           | 6           | 2                     | 235                     | 211  | 94    | 1   |
| TAJA336*006TNJ  | A         | 33               | 6.3               | 85                     | 4                    | 125                       | 2.1           | 8           | 2.2                   | 185                     | 166  | 74    | 1   |
| TAJB336*006TNJ  | B         | 33               | 6.3               | 85                     | 4                    | 125                       | 2.1           | 6           | 2.2                   | 197                     | 177  | 79    | 1   |
| TAJA476*006TNJ  | A         | 47               | 6.3               | 85                     | 4                    | 125                       | 2.8           | 10          | 1.6                   | 217                     | 195  | 87    | 1   |
| TAJB476*006TNJ  | B         | 47               | 6.3               | 85                     | 4                    | 125                       | 3             | 6           | 2                     | 206                     | 186  | 82    | 1   |
| TAJC476*006TNJ  | C         | 47               | 6.3               | 85                     | 4                    | 125                       | 3             | 6           | 1.6                   | 262                     | 236  | 105   | 1   |
| TAJB686*006TNJ  | B         | 68               | 6.3               | 85                     | 4                    | 125                       | 4             | 8           | 0.9                   | 307                     | 277  | 123   | 1   |
| TAJC686*006TNJ  | C         | 68               | 6.3               | 85                     | 4                    | 125                       | 4.3           | 6           | 1.5                   | 271                     | 244  | 108   | 1   |
| TAJB107*006TNJ  | B         | 100              | 6.3               | 85                     | 4                    | 125                       | 6.3           | 10          | 1.4                   | 246                     | 222  | 99    | 1   |
| TAJC107*006TNJ  | C         | 100              | 6.3               | 85                     | 4                    | 125                       | 6.3           | 6           | 0.9                   | 350                     | 315  | 140   | 1   |
| TAJD107*006TNJV | D         | 100              | 6.3               | 85                     | 4                    | 125                       | 6.3           | 6           | 0.9                   | 408                     | 367  | 163   | 3   |
| TAJY107*006TNJV | Y         | 100              | 6.3               | 85                     | 4                    | 125                       | 6.3           | 6           | 0.7                   | 423                     | 380  | 169   | 3   |
| TAJC157*006TNJ  | C         | 150              | 6.3               | 85                     | 4                    | 125                       | 9.5           | 6           | 1.3                   | 291                     | 262  | 116   | 1   |
| TAJD157*006TNJV | D         | 150              | 6.3               | 85                     | 4                    | 125                       | 9.5           | 6           | 0.9                   | 408                     | 367  | 163   | 3   |
| TAJY157*006TNJV | Y         | 150              | 6.3               | 85                     | 4                    | 125                       | 9.5           | 6           | 0.4                   | 559                     | 503  | 224   | 3   |
| TAJC227*006TNJ  | C         | 220              | 6.3               | 85                     | 4                    | 125                       | 8.8           | 8           | 1.2                   | 303                     | 272  | 121   | 1   |
| TAJD227*006TNJV | D         | 220              | 6.3               | 85                     | 4                    | 125                       | 13.9          | 8           | 0.4                   | 612                     | 551  | 245   | 3   |
| TAJY227*006TNJV | Y         | 220              | 6.3               | 85                     | 4                    | 125                       | 13.9          | 8           | 0.7                   | 423                     | 380  | 169   | 3   |
| TAJD337*006TNJV | D         | 330              | 6.3               | 85                     | 4                    | 125                       | 20.8          | 8           | 0.4                   | 612                     | 551  | 245   | 3   |
| TAJE337*006TNJV | E         | 330              | 6.3               | 85                     | 4                    | 125                       | 20.8          | 8           | 0.4                   | 642                     | 578  | 257   | 3   |
| TAJD477*006TNJV | D         | 470              | 6.3               | 85                     | 4                    | 125                       | 28            | 12          | 0.4                   | 612                     | 551  | 245   | 3   |
| TAJE477*006TNJV | E         | 470              | 6.3               | 85                     | 4                    | 125                       | 28            | 10          | 0.4                   | 642                     | 578  | 257   | 3   |
| TAJD687*006TNJV | D         | 680              | 6.3               | 85                     | 4                    | 125                       | 40.8          | 20          | 0.5                   | 548                     | 493  | 219   | 3   |
| TAJE687*006TNJV | E         | 680              | 6.3               | 85                     | 4                    | 125                       | 42.8          | 10          | 0.5                   | 574                     | 517  | 230   | 3   |
| 10 Volt @ 85°C  |           |                  |                   |                        |                      |                           |               |             |                       |                         |      |       |     |
| TAJA225*010TNJ  | A         | 2.2              | 10                | 85                     | 7                    | 125                       | 0.5           | 6           | 7                     | 104                     | 93   | 41    | 1   |
| TAJA475*010TNJ  | A         | 4.7              | 10                | 85                     | 7                    | 125                       | 0.5           | 6           | 5                     | 122                     | 110  | 49    | 1   |
| TAJB475*010TNJ  | B         | 4.7              | 10                | 85                     | 7                    | 125                       | 0.5           | 6           | 4                     | 146                     | 131  | 58    | 1   |
| TAJA685*010TNJ  | A         | 6.8              | 10                | 85                     | 7                    | 125                       | 0.7           | 6           | 4                     | 137                     | 123  | 55    | 1   |
| TAJB685*010TNJ  | B         | 6.8              | 10                | 85                     | 7                    | 125                       | 0.7           | 6           | 3                     | 168                     | 151  | 67    | 1   |
| TAJA106*010TNJ  | A         | 10               | 10                | 85                     | 7                    | 125                       | 1             | 6           | 3                     | 158                     | 142  | 63    | 1   |
| TAJB106*010TNJ  | B         | 10               | 10                | 85                     | 7                    | 125                       | 1             | 6           | 2.1                   | 201                     | 181  | 80    | 1   |
| TAJP106*010TNJ  | P         | 10               | 10                | 85                     | 7                    | 125                       | 1             | 8           | 6                     | 100                     | 90   | 40    | 1   |
| TAJA156*010TNJ  | A         | 15               | 10                | 85                     | 7                    | 125                       | 1.5           | 6           | 3.2                   | 153                     | 138  | 61    | 1   |
| TAJB156*010TNJ  | B         | 15               | 10                | 85                     | 7                    | 125                       | 1.5           | 6           | 2.8                   | 174                     | 157  | 70    | 1   |
| TAJC156*010TNJ  | C         | 15               | 10                | 85                     | 7                    | 125                       | 1.5           | 6           | 2                     | 235                     | 211  | 94    | 1   |
| TAJA226*010TNJ  | A         | 22               | 10                | 85                     | 7                    | 125                       | 2.2           | 8           | 3                     | 158                     | 142  | 63    | 1   |
| TAJB226*010TNJ  | B         | 22               | 10                | 85                     | 7                    | 125                       | 2.2           | 6           | 2.4                   | 188                     | 169  | 75    | 1   |
| TAJC226*010TNJ  | C         | 22               | 10                | 85                     | 7                    | 125                       | 2.2           | 6           | 1.8                   | 247                     | 222  | 99    | 1   |
| TAJB336*010TNJ  | B         | 33               | 10                | 85                     | 7                    | 125                       | 3.3           | 6           | 1.8                   | 217                     | 196  | 87    | 1   |
| TAJC336*010TNJ  | C         | 33               | 10                | 85                     | 7                    | 125                       | 3.3           | 6           | 1.6                   | 262                     | 236  | 105   | 1   |
| TAJB476*010TNJ  | B         | 47               | 10                | 85                     | 7                    | 125                       | 4.7           | 8           | 1                     | 292                     | 262  | 117   | 1   |
| TAJC476*010TNJ  | C         | 47               | 10                | 85                     | 7                    | 125                       | 4.7           | 6           | 1.2                   | 303                     | 272  | 121   | 1   |
| TAJD476*010TNJV | D         | 47               | 10                | 85                     | 7                    | 125                       | 4.7           | 6           | 0.4                   | 612                     | 551  | 245   | 3   |
| TAJB686*010TNJ  | B         | 68               | 10                | 85                     | 7                    | 125                       | 6.8           | 8           | 1.4                   | 246                     | 222  | 99    | 1   |
| TAJC686*010TNJ  | C         | 68               | 10                | 85                     | 7                    | 125                       | 6.8           | 6           | 1.3                   | 291                     | 262  | 116   | 1   |
| TAJD686*010TNJV | D         | 68               | 10                | 85                     | 7                    | 125                       | 6.8           | 6           | 0.9                   | 408                     | 367  | 163   | 3   |
| TAJY686*010TNJV | Y         | 68               | 10                | 85                     | 7                    | 125                       | 6.8           | 6           | 0.9                   | 373                     | 335  | 149   | 3   |
| TAJC107*010TNJ  | C         | 100              | 10                | 85                     | 7                    | 125                       | 10            | 8           | 1.2                   | 303                     | 272  | 121   | 1   |
| TAJD107*010TNJV | D         | 100              | 10                | 85                     | 7                    | 125                       | 10            | 6           | 0.9                   | 408                     | 367  | 163   | 3   |
| TAJY107*010TNJV | Y         | 100              | 10                | 85                     | 7                    | 125                       | 10            | 6           | 0.9                   | 373                     | 335  | 149   | 3   |
| TAJD157*010TNJV | D         | 150              | 10                | 85                     | 7                    | 125                       | 15            | 8           | 0.9                   | 408                     | 367  | 163   | 3   |
| TAJE157*010TNJV | E         | 150              | 10                | 85                     | 7                    | 125                       | 15            | 8           | 0.9                   | 428                     | 385  | 171   | 3   |
| TAJY157*010TNJV | Y         | 150              | 10                | 85                     | 7                    | 125                       | 15            | 6           | 1.2                   | 323                     | 290  | 129   | 3   |
| TAJD227*010TNJV | D         | 220              | 10                | 85                     | 7                    | 125                       | 22            | 8           | 0.5                   | 548                     | 493  | 219   | 3   |
| TAJE227*010TNJV | E         | 220              | 10                | 85                     | 7                    | 125                       | 22            | 8           | 0.5                   | 574                     | 517  | 230   | 3   |
| TAJD337*010TNJV | D         | 330              | 10                | 85                     | 7                    | 125                       | 33            | 8           | 0.9                   | 408                     | 367  | 163   | 3   |
| TAJE337*010TNJV | E         | 330              | 10                | 85                     | 7                    | 125                       | 33            | 8           | 0.9                   | 428                     | 385  | 171   | 3   |
| 16 Volt @ 85°C  |           |                  |                   |                        |                      |                           |               |             |                       |                         |      |       |     |
| TAJA105*016TNJ  | A         | 1                | 16                | 85                     | 10                   | 125                       | 0.5           | 4           | 11                    | 83                      | 74   | 33    | 1   |
| TAJA225*016TNJ  | A         | 2.2              | 16                | 85                     | 10                   | 125                       | 0.5           | 6           | 6.5                   | 107                     | 97   | 43    | 1   |
| TAJA335*016TNJ  | A         | 3.3              | 16                | 85                     | 10                   | 125                       | 0.5           | 6           | 5                     | 122                     | 110  | 49    | 1   |
| TAJB335*016TNJ  | B         | 3.3              | 16                | 85                     | 10                   | 125                       | 0.5           | 6           | 4.5                   | 137                     | 124  | 55    | 1   |
| TAJA475*016TNJ  | A         | 4.7              | 16                | 85                     | 10                   | 125                       | 0.8           | 6           | 4                     | 137                     | 123  | 55    | 1   |

# TAJ Automotive Range

## Standard Tantalum - Automotive Product Range



### RATINGS & PART NUMBER REFERENCE

| Part Number     | Case Size | Capacitance (µF) | Rated Voltage (V) | Rated Temperature (°C) | Category Voltage (V) | Category Temperature (°C) | DCL Max. (µA) | DF Max. (%) | ESR Max. @ 100kHz (Ω) | 100kHz RMS Current (mA) |      |       | MSL |
|-----------------|-----------|------------------|-------------------|------------------------|----------------------|---------------------------|---------------|-------------|-----------------------|-------------------------|------|-------|-----|
|                 |           |                  |                   |                        |                      |                           |               |             |                       | 25°C                    | 85°C | 125°C |     |
| TAJB475*016TNJ  | B         | 4.7              | 16                | 85                     | 10                   | 125                       | 0.8           | 6           | 3.5                   | 156                     | 140  | 62    | 1   |
| TAJA685*016TNJ  | A         | 6.8              | 16                | 85                     | 10                   | 125                       | 1.1           | 6           | 3.5                   | 146                     | 132  | 59    | 1   |
| TAJB685*016TNJ  | B         | 6.8              | 16                | 85                     | 10                   | 125                       | 1.1           | 6           | 2.5                   | 184                     | 166  | 74    | 1   |
| TAJA106*016TNJ  | A         | 10               | 16                | 85                     | 10                   | 125                       | 1.6           | 6           | 3                     | 158                     | 142  | 63    | 1   |
| TAJB106*016TNJ  | B         | 10               | 16                | 85                     | 10                   | 125                       | 1.6           | 6           | 2.5                   | 184                     | 166  | 74    | 1   |
| TAJC106*016TNJ  | C         | 10               | 16                | 85                     | 10                   | 125                       | 1.6           | 6           | 2                     | 235                     | 211  | 94    | 1   |
| TAJB156*016TNJ  | B         | 15               | 16                | 85                     | 10                   | 125                       | 2.4           | 6           | 2.5                   | 184                     | 166  | 74    | 1   |
| TAJC156*016TNJ  | C         | 15               | 16                | 85                     | 10                   | 125                       | 2.4           | 6           | 1.8                   | 247                     | 222  | 99    | 1   |
| TAJB226*016TNJ  | B         | 22               | 16                | 85                     | 10                   | 125                       | 3.5           | 6           | 2.3                   | 192                     | 173  | 77    | 1   |
| TAJC226*016TNJ  | C         | 22               | 16                | 85                     | 10                   | 125                       | 3.5           | 6           | 1                     | 332                     | 298  | 133   | 1   |
| TAJD226*016TNJV | D         | 22               | 16                | 85                     | 10                   | 125                       | 3.5           | 6           | 1.1                   | 369                     | 332  | 148   | 3   |
| TAJB336*016TNJ  | B         | 33               | 16                | 85                     | 10                   | 125                       | 5.3           | 8           | 2.1                   | 201                     | 181  | 80    | 1   |
| TAJC336*016TNJ  | C         | 33               | 16                | 85                     | 10                   | 125                       | 5.3           | 6           | 1.5                   | 271                     | 244  | 108   | 1   |
| TAJD336*016TNJV | D         | 33               | 16                | 85                     | 10                   | 125                       | 5.3           | 6           | 0.9                   | 408                     | 367  | 163   | 3   |
| TAJY336*016TNJV | Y         | 33               | 16                | 85                     | 10                   | 125                       | 5.3           | 6           | 0.9                   | 373                     | 335  | 149   | 3   |
| TAJC476*016TNJ  | C         | 47               | 16                | 85                     | 10                   | 125                       | 7.5           | 6           | 0.5                   | 469                     | 422  | 188   | 1   |
| TAJD476*016TNJV | D         | 47               | 16                | 85                     | 10                   | 125                       | 7.5           | 6           | 0.9                   | 408                     | 367  | 163   | 3   |
| TAJY476*016TNJV | Y         | 47               | 16                | 85                     | 10                   | 125                       | 7.5           | 6           | 0.7                   | 423                     | 380  | 169   | 3   |
| TAJC686*016TNJ  | C         | 68               | 16                | 85                     | 10                   | 125                       | 10.9          | 6           | 1.3                   | 291                     | 262  | 116   | 1   |
| TAJD686*016TNJV | D         | 68               | 16                | 85                     | 10                   | 125                       | 10.9          | 6           | 0.9                   | 408                     | 367  | 163   | 3   |
| TAJY686*016TNJV | Y         | 68               | 16                | 85                     | 10                   | 125                       | 10.9          | 6           | 0.9                   | 373                     | 335  | 149   | 3   |
| TAJD107*016TNJV | D         | 100              | 16                | 85                     | 10                   | 125                       | 16            | 6           | 0.6                   | 500                     | 450  | 200   | 3   |
| TAJE107*016TNJV | E         | 100              | 16                | 85                     | 10                   | 125                       | 16            | 6           | 0.9                   | 428                     | 385  | 171   | 3   |
| TAJD157*016TNJV | D         | 150              | 16                | 85                     | 10                   | 125                       | 24            | 6           | 0.9                   | 408                     | 367  | 163   | 3   |
| TAJE157*016TNJV | E         | 150              | 16                | 85                     | 10                   | 125                       | 24            | 8           | 0.3                   | 742                     | 667  | 297   | 3   |
| TAJE227*016TNJV | E         | 220              | 16                | 85                     | 10                   | 125                       | 35.2          | 10          | 0.5                   | 574                     | 517  | 230   | 3   |
| 20 Volt @ 85°C  |           |                  |                   |                        |                      |                           |               |             |                       |                         |      |       |     |
| TAJA105*020TNJ  | A         | 1                | 20                | 85                     | 13                   | 125                       | 0.5           | 4           | 9                     | 91                      | 82   | 37    | 1   |
| TAJA155*020TNJ  | A         | 1.5              | 20                | 85                     | 13                   | 125                       | 0.5           | 6           | 6.5                   | 107                     | 97   | 43    | 1   |
| TAJA225*020TNJ  | A         | 2.2              | 20                | 85                     | 13                   | 125                       | 0.5           | 6           | 5.3                   | 119                     | 107  | 48    | 1   |
| TAJB225*020TNJ  | B         | 2.2              | 20                | 85                     | 13                   | 125                       | 0.5           | 6           | 3.5                   | 156                     | 140  | 62    | 1   |
| TAJA335*020TNJ  | A         | 3.3              | 20                | 85                     | 13                   | 125                       | 0.7           | 6           | 4.5                   | 129                     | 116  | 52    | 1   |
| TAJB335*020TNJ  | B         | 3.3              | 20                | 85                     | 13                   | 125                       | 0.7           | 6           | 3                     | 168                     | 151  | 67    | 1   |
| TAJA475*020TNJ  | A         | 4.7              | 20                | 85                     | 13                   | 125                       | 0.9           | 6           | 4                     | 137                     | 123  | 55    | 1   |
| TAJB475*020TNJ  | B         | 4.7              | 20                | 85                     | 13                   | 125                       | 0.9           | 6           | 3                     | 168                     | 151  | 67    | 1   |
| TAJA685*020TNJ  | A         | 6.8              | 20                | 85                     | 13                   | 125                       | 1.4           | 6           | 2.4                   | 177                     | 159  | 71    | 1   |
| TAJB685*020TNJ  | B         | 6.8              | 20                | 85                     | 13                   | 125                       | 1.4           | 6           | 2.5                   | 184                     | 166  | 74    | 1   |
| TAJC685*020TNJ  | C         | 6.8              | 20                | 85                     | 13                   | 125                       | 1.4           | 6           | 2                     | 235                     | 211  | 94    | 1   |
| TAJB106*020TNJ  | B         | 10               | 20                | 85                     | 13                   | 125                       | 2             | 6           | 2.1                   | 201                     | 181  | 80    | 1   |
| TAJC106*020TNJ  | C         | 10               | 20                | 85                     | 13                   | 125                       | 2             | 6           | 1.2                   | 303                     | 272  | 121   | 1   |
| TAJB156*020TNJ  | B         | 15               | 20                | 85                     | 13                   | 125                       | 3             | 6           | 2                     | 206                     | 186  | 82    | 1   |
| TAJC156*020TNJ  | C         | 15               | 20                | 85                     | 13                   | 125                       | 3             | 6           | 1.7                   | 254                     | 229  | 102   | 1   |
| TAJB226*020TNJ  | B         | 22               | 20                | 85                     | 13                   | 125                       | 4.4           | 6           | 1.8                   | 217                     | 196  | 87    | 1   |
| TAJC226*020TNJ  | C         | 22               | 20                | 85                     | 13                   | 125                       | 4.4           | 6           | 1.6                   | 262                     | 236  | 105   | 1   |
| TAJD226*020TNJV | D         | 22               | 20                | 85                     | 13                   | 125                       | 4.4           | 6           | 0.9                   | 408                     | 367  | 163   | 3   |
| TAJY226*020TNJV | Y         | 22               | 20                | 85                     | 13                   | 125                       | 4.4           | 6           | 0.9                   | 373                     | 335  | 149   | 3   |
| TAJC336*020TNJ  | C         | 33               | 20                | 85                     | 13                   | 125                       | 6.6           | 6           | 1.5                   | 271                     | 244  | 108   | 1   |
| TAJD336*020TNJV | D         | 33               | 20                | 85                     | 13                   | 125                       | 6.6           | 6           | 0.9                   | 408                     | 367  | 163   | 3   |
| TAJY336*020TNJV | Y         | 33               | 20                | 85                     | 13                   | 125                       | 6.6           | 6           | 0.6                   | 456                     | 411  | 183   | 3   |
| TAJD476*020TNJV | D         | 47               | 20                | 85                     | 13                   | 125                       | 9.4           | 6           | 0.9                   | 408                     | 367  | 163   | 3   |
| TAJY476*020TNJV | Y         | 47               | 20                | 85                     | 13                   | 125                       | 9.4           | 6           | 0.9                   | 373                     | 335  | 149   | 3   |
| TAJD686*020TNJV | D         | 68               | 20                | 85                     | 13                   | 125                       | 13.6          | 6           | 0.4                   | 612                     | 551  | 245   | 3   |
| TAJE686*020TNJV | E         | 68               | 20                | 85                     | 13                   | 125                       | 13.6          | 6           | 0.9                   | 428                     | 385  | 171   | 3   |
| TAJE107*020TNJV | E         | 100              | 20                | 85                     | 13                   | 125                       | 20            | 6           | 0.4                   | 642                     | 578  | 257   | 3   |
| 25 Volt @ 85°C  |           |                  |                   |                        |                      |                           |               |             |                       |                         |      |       |     |
| TAJA474*025TNJ  | A         | 0.47             | 25                | 85                     | 17                   | 125                       | 0.5           | 4           | 14                    | 73                      | 66   | 29    | 1   |
| TAJA684*025TNJ  | A         | 0.68             | 25                | 85                     | 17                   | 125                       | 0.5           | 4           | 10                    | 87                      | 78   | 35    | 1   |
| TAJA105*025TNJ  | A         | 1                | 25                | 85                     | 17                   | 125                       | 0.5           | 4           | 8                     | 97                      | 87   | 39    | 1   |
| TAJA155*025TNJ  | A         | 1.5              | 25                | 85                     | 17                   | 125                       | 0.5           | 6           | 7.5                   | 100                     | 90   | 40    | 1   |
| TAJB155*025TNJ  | B         | 1.5              | 25                | 85                     | 17                   | 125                       | 0.5           | 6           | 5                     | 130                     | 117  | 52    | 1   |
| TAJA225*025TNJ  | A         | 2.2              | 25                | 85                     | 17                   | 125                       | 0.6           | 6           | 7                     | 104                     | 93   | 41    | 1   |
| TAJB225*025TNJ  | B         | 2.2              | 25                | 85                     | 17                   | 125                       | 0.6           | 6           | 4.5                   | 137                     | 124  | 55    | 1   |
| TAJA335*025TNJ  | A         | 3.3              | 25                | 85                     | 17                   | 125                       | 0.8           | 6           | 3.7                   | 142                     | 128  | 57    | 1   |
| TAJB335*025TNJ  | B         | 3.3              | 25                | 85                     | 17                   | 125                       | 0.8           | 6           | 3.5                   | 156                     | 140  | 62    | 1   |
| TAJB475*025TNJ  | B         | 4.7              | 25                | 85                     | 17                   | 125                       | 1.2           | 6           | 1.5                   | 238                     | 214  | 95    | 1   |
| TAJC475*025TNJ  | C         | 4.7              | 25                | 85                     | 17                   | 125                       | 1.2           | 6           | 2.4                   | 214                     | 193  | 86    | 1   |
| TAJB685*025TNJ  | B         | 6.8              | 25                | 85                     | 17                   | 125                       | 1.7           | 6           | 2.8                   | 174                     | 157  | 70    | 1   |
| TAJC685*025TNJ  | C         | 6.8              | 25                | 85                     | 17                   | 125                       | 1.7           | 6           | 2                     | 235                     | 211  | 94    | 1   |
| TAJB106*025TNJ  | B         | 10               | 25                | 85                     | 17                   | 125                       | 2.5           | 6           | 2.5                   | 184                     | 166  | 74    | 1   |
| TAJC106*025TNJ  | C         | 10               | 25                | 85                     | 17                   | 125                       | 2.5           | 6           | 1.8                   | 247                     | 222  | 99    | 1   |
| TAJD106*025TNJV | D         | 10               | 25                | 85                     | 17                   | 125                       | 2.5           | 6           | 1.2                   | 354                     | 318  | 141   | 3   |
| TAJC156*025TNJ  | C         | 15               | 25                | 85                     | 17                   | 125                       | 3.8           | 6           | 1.6                   | 262                     | 236  | 105   | 1   |

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# TAJ Automotive Range

## Standard Tantalum - Automotive Product Range



### RATINGS & PART NUMBER REFERENCE

| Part Number     | Case Size | Capacitance (µF) | Rated Voltage (V) | Rated Temperature (°C) | Category Voltage (V) | Category Temperature (°C) | DCL Max. (µA) | DF Max. (%) | ESR Max. @ 100kHz (Ω) | 100kHz RMS Current (mA) |      |       | MSL |
|-----------------|-----------|------------------|-------------------|------------------------|----------------------|---------------------------|---------------|-------------|-----------------------|-------------------------|------|-------|-----|
|                 |           |                  |                   |                        |                      |                           |               |             |                       | 25°C                    | 85°C | 125°C |     |
| TAJD156*025TNJV | D         | 15               | 25                | 85                     | 17                   | 125                       | 3.8           | 6           | 1                     | 387                     | 349  | 155   | 3   |
| TAJY156*025TNJV | Y         | 15               | 25                | 85                     | 17                   | 125                       | 3.8           | 6           | 1                     | 354                     | 318  | 141   | 3   |
| TAJC226*025TNJ  | C         | 22               | 25                | 85                     | 17                   | 125                       | 5.5           | 6           | 1.4                   | 280                     | 252  | 112   | 1   |
| TAJD226*025TNJV | D         | 22               | 25                | 85                     | 17                   | 125                       | 5.5           | 6           | 0.9                   | 408                     | 367  | 163   | 3   |
| TAJY226*025TNJV | Y         | 22               | 25                | 85                     | 17                   | 125                       | 5.5           | 6           | 0.8                   | 395                     | 356  | 158   | 3   |
| TAJD336*025TNJV | D         | 33               | 25                | 85                     | 17                   | 125                       | 8.3           | 6           | 0.9                   | 408                     | 367  | 163   | 3   |
| TAJD476*025TNJV | D         | 47               | 25                | 85                     | 17                   | 125                       | 11.8          | 6           | 0.9                   | 408                     | 367  | 163   | 3   |
| TAJE476*025TNJV | E         | 47               | 25                | 85                     | 17                   | 125                       | 11.8          | 6           | 0.9                   | 428                     | 385  | 171   | 3   |
| TAJE686*025TNJV | E         | 68               | 25                | 85                     | 17                   | 125                       | 17            | 6           | 0.9                   | 428                     | 385  | 171   | 3   |
| TAJE107*025TNJV | E         | 100              | 25                | 85                     | 17                   | 125                       | 25            | 10          | 0.3                   | 742                     | 667  | 297   | 3   |
| 35 Volt @ 85°C  |           |                  |                   |                        |                      |                           |               |             |                       |                         |      |       |     |
| TAJA334*035TNJ  | A         | 0.33             | 35                | 85                     | 23                   | 125                       | 0.5           | 4           | 15                    | 71                      | 64   | 28    | 1   |
| TAJA474*035TNJ  | A         | 0.47             | 35                | 85                     | 23                   | 125                       | 0.5           | 4           | 12                    | 79                      | 71   | 32    | 1   |
| TAJA684*035TNJ  | A         | 0.68             | 35                | 85                     | 23                   | 125                       | 0.5           | 4           | 8                     | 97                      | 87   | 39    | 1   |
| TAJA105*035TNJ  | A         | 1                | 35                | 85                     | 23                   | 125                       | 0.5           | 4           | 7.5                   | 100                     | 90   | 40    | 1   |
| TAJB105*035TNJ  | B         | 1                | 35                | 85                     | 23                   | 125                       | 0.5           | 4           | 6.5                   | 114                     | 103  | 46    | 1   |
| TAJA155*035TNJ  | A         | 1.5              | 35                | 85                     | 23                   | 125                       | 0.5           | 6           | 7.5                   | 100                     | 90   | 40    | 1   |
| TAJB155*035TNJ  | B         | 1.5              | 35                | 85                     | 23                   | 125                       | 0.5           | 6           | 5.2                   | 128                     | 115  | 51    | 1   |
| TAJB225*035TNJ  | B         | 2.2              | 35                | 85                     | 23                   | 125                       | 0.8           | 6           | 4.2                   | 142                     | 128  | 57    | 1   |
| TAJC225*035TNJ  | C         | 2.2              | 35                | 85                     | 23                   | 125                       | 0.8           | 6           | 3.5                   | 177                     | 160  | 71    | 1   |
| TAJB335*035TNJ  | B         | 3.3              | 35                | 85                     | 23                   | 125                       | 1.2           | 6           | 3.5                   | 156                     | 140  | 62    | 1   |
| TAJC335*035TNJ  | C         | 3.3              | 35                | 85                     | 23                   | 125                       | 1.2           | 6           | 2.5                   | 210                     | 189  | 84    | 1   |
| TAJB475*035TNJ  | B         | 4.7              | 35                | 85                     | 23                   | 125                       | 1.6           | 6           | 3.1                   | 166                     | 149  | 66    | 1   |
| TAJC475*035TNJ  | C         | 4.7              | 35                | 85                     | 23                   | 125                       | 1.6           | 6           | 2.2                   | 224                     | 201  | 89    | 1   |
| TAJD475*035TNJV | D         | 4.7              | 35                | 85                     | 23                   | 125                       | 1.6           | 6           | 1.5                   | 316                     | 285  | 126   | 3   |
| TAJC685*035TNJ  | C         | 6.8              | 35                | 85                     | 23                   | 125                       | 2.4           | 6           | 1.8                   | 247                     | 222  | 99    | 1   |
| TAJD685*035TNJV | D         | 6.8              | 35                | 85                     | 23                   | 125                       | 2.4           | 6           | 1.3                   | 340                     | 306  | 136   | 3   |
| TAJC106*035TNJ  | C         | 10               | 35                | 85                     | 23                   | 125                       | 3.5           | 6           | 1.6                   | 262                     | 236  | 105   | 1   |
| TAJD106*035TNJV | D         | 10               | 35                | 85                     | 23                   | 125                       | 3.5           | 6           | 1                     | 387                     | 349  | 155   | 3   |
| TAJY106*035TNJV | Y         | 10               | 35                | 85                     | 23                   | 125                       | 3.5           | 6           | 1                     | 354                     | 318  | 141   | 3   |
| TAJD156*035TNJV | D         | 15               | 35                | 85                     | 23                   | 125                       | 5.3           | 6           | 0.9                   | 408                     | 367  | 163   | 3   |
| TAJY156*035TNJV | Y         | 15               | 35                | 85                     | 23                   | 125                       | 5.3           | 6           | 0.6                   | 456                     | 411  | 183   | 3   |
| TAJD226*035TNJV | D         | 22               | 35                | 85                     | 23                   | 125                       | 7.7           | 6           | 0.9                   | 408                     | 367  | 163   | 3   |
| TAJE226*035TNJV | E         | 22               | 35                | 85                     | 23                   | 125                       | 7.7           | 6           | 0.5                   | 574                     | 517  | 230   | 3   |
| TAJD336*035TNJV | D         | 33               | 35                | 85                     | 23                   | 125                       | 11.6          | 6           | 0.9                   | 408                     | 367  | 163   | 3   |
| TAJE336*035TNJV | E         | 33               | 35                | 85                     | 23                   | 125                       | 11.6          | 6           | 0.9                   | 428                     | 385  | 171   | 3   |
| TAJE476*035TNJV | E         | 47               | 35                | 85                     | 23                   | 125                       | 16.5          | 6           | 0.9                   | 428                     | 385  | 171   | 3   |
| 50 Volt @ 85°C  |           |                  |                   |                        |                      |                           |               |             |                       |                         |      |       |     |
| TAJA224*050TNJ  | A         | 0.22             | 50                | 85                     | 33                   | 125                       | 0.5           | 4           | 18                    | 65                      | 58   | 26    | 1   |
| TAJA334*050TNJ  | A         | 0.33             | 50                | 85                     | 33                   | 125                       | 0.5           | 4           | 17                    | 66                      | 60   | 27    | 1   |
| TAJA474*050TNJ  | A         | 0.47             | 50                | 85                     | 33                   | 125                       | 0.5           | 4           | 9.5                   | 89                      | 80   | 36    | 1   |
| TAJB474*050TNJ  | B         | 0.47             | 50                | 85                     | 33                   | 125                       | 0.5           | 4           | 9.5                   | 95                      | 85   | 38    | 1   |
| TAJB684*050TNJ  | B         | 0.68             | 50                | 85                     | 33                   | 125                       | 0.5           | 4           | 8                     | 103                     | 93   | 41    | 1   |
| TAJB105*050TNJ  | B         | 1                | 50                | 85                     | 33                   | 125                       | 0.5           | 6           | 7                     | 110                     | 99   | 44    | 1   |
| TAJC105*050TNJ  | C         | 1                | 50                | 85                     | 33                   | 125                       | 0.5           | 4           | 5.5                   | 141                     | 127  | 57    | 1   |
| TAJC155*050TNJ  | C         | 1.5              | 50                | 85                     | 33                   | 125                       | 0.8           | 6           | 4.5                   | 156                     | 141  | 63    | 1   |
| TAJC225*050TNJ  | C         | 2.2              | 50                | 85                     | 33                   | 125                       | 1.1           | 8           | 2.5                   | 210                     | 189  | 84    | 1   |
| TAJD225*050TNJV | D         | 2.2              | 50                | 85                     | 33                   | 125                       | 1.1           | 6           | 2.5                   | 245                     | 220  | 98    | 3   |
| TAJC335*050TNJ  | C         | 3.3              | 50                | 85                     | 33                   | 125                       | 1.6           | 6           | 2.5                   | 210                     | 189  | 84    | 1   |
| TAJD335*050TNJV | D         | 3.3              | 50                | 85                     | 33                   | 125                       | 1.7           | 6           | 2                     | 274                     | 246  | 110   | 3   |
| TAJC475*050TNJ  | C         | 4.7              | 50                | 85                     | 33                   | 125                       | 2.4           | 6           | 1.4                   | 280                     | 252  | 112   | 1   |
| TAJD475*050TNJV | D         | 4.7              | 50                | 85                     | 33                   | 125                       | 2.4           | 6           | 1.4                   | 327                     | 295  | 131   | 3   |
| TAJD685*050TNJV | D         | 6.8              | 50                | 85                     | 33                   | 125                       | 3.4           | 6           | 1                     | 387                     | 349  | 155   | 3   |
| TAJD106*050TNJV | D         | 10               | 50                | 85                     | 33                   | 125                       | 5             | 6           | 0.8                   | 433                     | 390  | 173   | 3   |
| TAJE106*050TNJV | E         | 10               | 50                | 85                     | 33                   | 125                       | 5             | 6           | 1                     | 406                     | 366  | 162   | 3   |
| TAJE156*050TNJV | E         | 15               | 50                | 85                     | 33                   | 125                       | 7.5           | 6           | 0.6                   | 524                     | 472  | 210   | 3   |

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

\*Please use "U" instead of "T" in the suffix letter for 13" reel packaging

**Please use specific PN for automotive version – see "HOW TO ORDER".**

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.

For typical weight and composition see page 259.

**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.**

# TAJ Automotive Range

## Standard Tantalum - Automotive Product Range

### QUALIFICATION TABLE

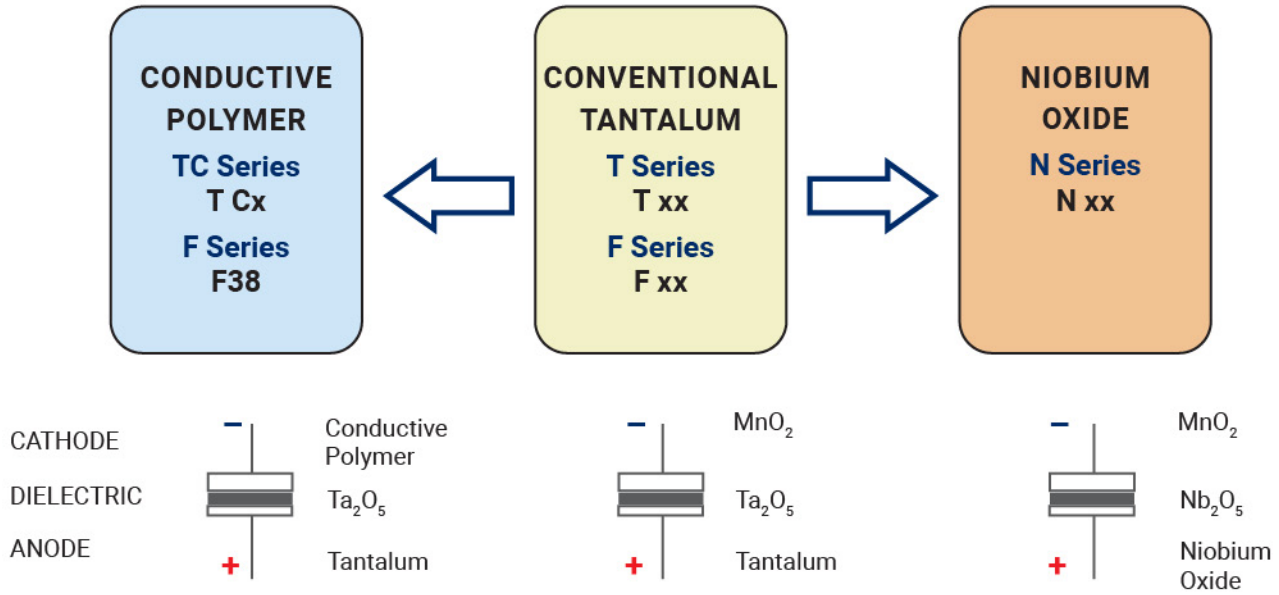
| TEST                         | TAJ automotive series (Temperature range -55°C to +125°C)                                                                                                                                                 |               |               |                    |                                    |           |           |           |            |           |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---------------|--------------------|------------------------------------|-----------|-----------|-----------|------------|-----------|
|                              | Condition                                                                                                                                                                                                 |               |               | Characteristics    |                                    |           |           |           |            |           |
| <b>Endurance</b>             | Apply rated voltage (Ur) at 85°C and / or category voltage (Uc) at 125°C for 2000 hours through a circuit impedance of $\leq 0.1\Omega/V$ . Stabilize at room temperature for 1-2 hours before measuring. |               |               | Visual examination | no visible damage                  |           |           |           |            |           |
|                              |                                                                                                                                                                                                           |               |               | DCL                | 1.25 x initial limit               |           |           |           |            |           |
|                              |                                                                                                                                                                                                           |               |               | $\Delta C/C$       | within $\pm 10\%$ of initial value |           |           |           |            |           |
|                              |                                                                                                                                                                                                           |               |               | DF                 | initial limit                      |           |           |           |            |           |
|                              |                                                                                                                                                                                                           |               |               | ESR                | initial limit                      |           |           |           |            |           |
| <b>Storage Life</b>          | Store at 125°C, no voltage applied, for 2000 hours. Stabilize at room temperature for 1-2 hours before measuring.                                                                                         |               |               | Visual examination | no visible damage                  |           |           |           |            |           |
|                              |                                                                                                                                                                                                           |               |               | DCL                | 1.25 x initial limit               |           |           |           |            |           |
|                              |                                                                                                                                                                                                           |               |               | $\Delta C/C$       | within $\pm 10\%$ of initial value |           |           |           |            |           |
|                              |                                                                                                                                                                                                           |               |               | DF                 | initial limit                      |           |           |           |            |           |
|                              |                                                                                                                                                                                                           |               |               | ESR                | initial limit                      |           |           |           |            |           |
| <b>Humidity</b>              | Store at 65°C and 95% relative humidity for 500 hours, with no applied voltage. Stabilize at room temperature and humidity for 1-2 hours before measuring.                                                |               |               | Visual examination | no visible damage                  |           |           |           |            |           |
|                              |                                                                                                                                                                                                           |               |               | DCL                | 1.5 x initial limit                |           |           |           |            |           |
|                              |                                                                                                                                                                                                           |               |               | $\Delta C/C$       | within $\pm 10\%$ of initial value |           |           |           |            |           |
|                              |                                                                                                                                                                                                           |               |               | DF                 | 1.2 x initial limit                |           |           |           |            |           |
|                              |                                                                                                                                                                                                           |               |               | ESR                | initial limit                      |           |           |           |            |           |
| <b>Biased Humidity</b>       | Apply rated voltage (Ur) at 85°C, 85% relative humidity for 1000 hours. Stabilize at room temperature and humidity for 1-2 hours before measuring.                                                        |               |               | Visual examination | no visible damage                  |           |           |           |            |           |
|                              |                                                                                                                                                                                                           |               |               | DCL                | 2 x initial limit                  |           |           |           |            |           |
|                              |                                                                                                                                                                                                           |               |               | $\Delta C/C$       | within $\pm 10\%$ of initial value |           |           |           |            |           |
|                              |                                                                                                                                                                                                           |               |               | DF                 | 1.2 x initial limit                |           |           |           |            |           |
|                              |                                                                                                                                                                                                           |               |               | ESR                | initial limit                      |           |           |           |            |           |
| <b>Temperature Stability</b> | Step                                                                                                                                                                                                      | Temperature°C | Duration(min) |                    | +20°C                              | -55°C     | +20°C     | +85°C     | +125°C     | +20°C     |
|                              | 1                                                                                                                                                                                                         | +20           | 15            | DCL                | IL*                                | n/a       | IL*       | 10 x IL*  | 12.5 x IL* | IL*       |
|                              | 2                                                                                                                                                                                                         | -55           | 15            | $\Delta C/C$       | n/a                                | +0/-10%   | $\pm 5\%$ | +10/-0%   | +12/-0%    | $\pm 5\%$ |
|                              | 3                                                                                                                                                                                                         | +20           | 15            | DF                 | IL*                                | 1.5 x IL* | IL*       | 1.5 x IL* | 2 x IL*    | IL*       |
|                              | 4                                                                                                                                                                                                         | +85           | 15            | ESR                | IL*                                | 2 x IL*   | IL*       | IL*       | IL*        | IL*       |
|                              | 5                                                                                                                                                                                                         | +125          | 15            |                    |                                    |           |           |           |            |           |
|                              | 6                                                                                                                                                                                                         | +20           | 15            |                    |                                    |           |           |           |            |           |
| <b>Surge Voltage</b>         | Apply 1.3x category voltage (Uc) at 125°C for 1000 cycles of duration 6 min (30 sec charge, 5 min 30 sec discharge) through a charge / discharge resistance of 1000 $\Omega$                              |               |               | Visual examination | no visible damage                  |           |           |           |            |           |
|                              |                                                                                                                                                                                                           |               |               | DCL                | initial limit                      |           |           |           |            |           |
|                              |                                                                                                                                                                                                           |               |               | $\Delta C/C$       | within $\pm 5\%$ of initial value  |           |           |           |            |           |
|                              |                                                                                                                                                                                                           |               |               | DF                 | initial limit                      |           |           |           |            |           |
|                              |                                                                                                                                                                                                           |               |               | ESR                | initial limit                      |           |           |           |            |           |
| <b>Mechanical Shock</b>      | MIL-STD-202, Method 213, Condition F                                                                                                                                                                      |               |               | Visual examination | no visible damage                  |           |           |           |            |           |
|                              |                                                                                                                                                                                                           |               |               | DCL                | initial limit                      |           |           |           |            |           |
|                              |                                                                                                                                                                                                           |               |               | $\Delta C/C$       | within $\pm 5\%$ of initial value  |           |           |           |            |           |
|                              |                                                                                                                                                                                                           |               |               | DF                 | initial limit                      |           |           |           |            |           |
|                              |                                                                                                                                                                                                           |               |               | ESR                | initial limit                      |           |           |           |            |           |
| <b>Vibration</b>             | MIL-STD-202, Method 204, Condition D                                                                                                                                                                      |               |               | Visual examination | no visible damage                  |           |           |           |            |           |
|                              |                                                                                                                                                                                                           |               |               | DCL                | initial limit                      |           |           |           |            |           |
|                              |                                                                                                                                                                                                           |               |               | $\Delta C/C$       | within $\pm 5\%$ of initial value  |           |           |           |            |           |
|                              |                                                                                                                                                                                                           |               |               | DF                 | initial limit                      |           |           |           |            |           |
|                              |                                                                                                                                                                                                           |               |               | ESR                | initial limit                      |           |           |           |            |           |

\*Initial Limit

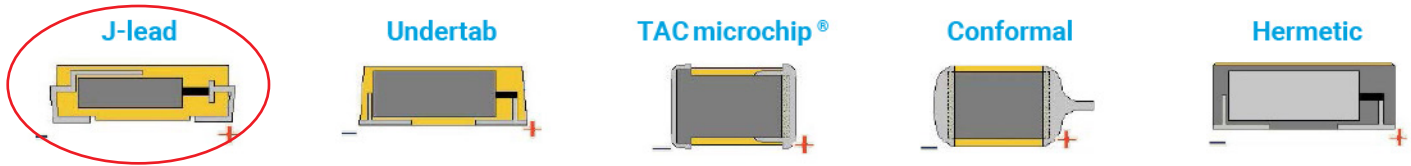
# TAJ Automotive Range

## Standard Tantalum - Automotive Product Range

### SOLID ELECTROLYTIC CAPACITOR ROADMAP



### FIVE CAPACITOR CONSTRUCTION STYLES



### SERIES LINE UP: CONVENTIONAL SMD MnO<sub>2</sub>

