

# TLJ Series



## Tantalum Solid Electrolytic Chip Capacitors High CV Consumer Series



### FEATURES

- High Volumetric Efficiency
- 3x reflow 260°C compatible
- 14 case sizes available including low profile codes
- Environmentally friendly
- Consumer applications (e.g. mobiles phones, PDA etc.)
- CV range: 10-1500µF / 2.5-20V



LEAD-FREE COMPATIBLE COMPONENT

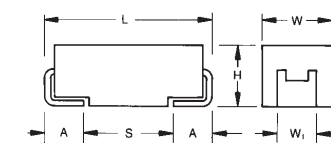
### APPLICATIONS

- Mobile phones
- MP3/4 players

### CASE DIMENSIONS: millimeters (inches)

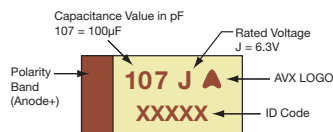
| Code | EIA Code | EIA Metric | L±0.20 (0.008) | W+0.20 (0.008)<br>-0.10 (0.004) | H+0.20 (0.008)<br>-0.10 (0.004) | W <sub>1</sub> ±0.20 (0.008) | A+0.30 (0.012)<br>-0.20 (0.008) | S Min.       |
|------|----------|------------|----------------|---------------------------------|---------------------------------|------------------------------|---------------------------------|--------------|
| 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) |
| F    | 2312     | 6032-20    | 6.00 (0.236)   | 3.20 (0.126)                    | 2.00 (0.079) max.               | 2.20 (0.087)                 | 1.30 (0.051)                    | 2.90 (0.114) |
| G    | 1206     | 3216-15    | 3.20 (0.126)   | 1.60 (0.063)                    | 1.50 (0.059) max                | 1.20 (0.047)                 | 0.80 (0.031)                    | 1.10 (0.043) |
| H    | 1210     | 3528-15    | 3.50 (0.138)   | 2.80 (0.110)                    | 1.50 (0.059) max                | 2.20 (0.087)                 | 0.80 (0.031)                    | 1.40 (0.055) |
| K    | 1206     | 3216-10    | 3.20 (0.126)   | 1.60 (0.063)                    | 1.00 (0.039) max                | 1.20 (0.047)                 | 0.80 (0.031)                    | 1.10 (0.043) |
| N    | 0805     | 2012-10    | 2.05 (0.081)   | 1.30 (0.051)                    | 1.00 (0.039) max                | 1.00 (0.039)                 | 0.50 (0.020)                    | 0.85 (0.033) |
| P    | 0805     | 2012-15    | 2.05 (0.081)   | 1.35 (0.053)                    | 1.50 (0.059) max                | 1.00±0.10<br>(0.039±0.004)   | 0.50 (0.020)                    | 0.85 (0.033) |
| R    | 0805     | 2012-12    | 2.05 (0.081)   | 1.30 (0.051)                    | 1.20 (0.047) max                | 1.00±0.10<br>(0.039±0.004)   | 0.50 (0.020)                    | 0.85 (0.033) |
| S    | 1206     | 3216-12    | 3.20 (0.126)   | 1.60 (0.063)                    | 1.20 (0.047) max                | 1.20 (0.047)                 | 0.80 (0.031)                    | 1.10 (0.043) |
| T    | 1210     | 3528-12    | 3.50 (0.138)   | 2.80 (0.110)                    | 1.20 (0.047) max                | 2.20 (0.087)                 | 0.80 (0.031)                    | 1.40 (0.033) |
| V    | 2924     | 7361-38    | 7.30 (0.287)   | 6.10 (0.240)                    | 3.55 (0.140)                    | 3.10 (0.120)                 | 1.30 (0.051)                    | 4.40 (0.173) |
| W    | 2312     | 6032-15    | 6.00 (0.236)   | 3.20 (0.126)                    | 1.50 (0.059) max                | 2.20 (0.087)                 | 1.30 (0.051)                    | 2.90 (0.114) |
| Y    | 2917     | 7343-20    | 7.30 (0.287)   | 4.30 (0.169)                    | 2.00 (0.079) max                | 2.40 (0.094)                 | 1.30 (0.051)                    | 4.40 (0.173) |

W1 dimension applies to the termination width for A dimensional area only.

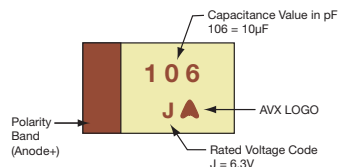


### MARKING

A, B, F, G, H, K, S, T, V, W,  
Y CASE



N, P, R CASE



### HOW TO ORDER

**TLJ**

Type

**W**

Case Size  
See table  
above

**157**

Capacitance Code  
pF code: 1st two digits  
represent significant figures,  
3rd digit represents multiplier  
(number of zeros to follow)

**M**

Tolerance  
M = ±20%

**010**

Rated DC Voltage  
002 = 2.5Vdc  
004 = 4Vdc  
006 = 6.3Vdc  
010 = 10Vdc  
016 = 16Vdc  
020 = 20Vdc

**R**

Packaging  
R = Pure Tin 7" Reel  
S = Pure Tin 13" Reel

**0200**

ESR in mΩ

### TECHNICAL SPECIFICATIONS

Technical Data:

All technical data relate to an ambient temperature of +25°C

Capacitance Range:

10 µF to 1500 µF

Capacitance Tolerance:

±20%

Rated Voltage (V<sub>R</sub>) -55°C ≤ +40°C:

2.5 4 6.3 10 16 20

Category Voltage (V<sub>C</sub>) at 85°C:

1.3 2 3.2 5 8 10

Category Voltage (V<sub>C</sub>) at 125°C:

0.5 0.8 1.3 2 3.2 4

Temperature Range:

-55°C to +125°C with category voltage

Reliability:

0.2% per 1000 hours at 85°C, 0.5xV<sub>R</sub> with 0.1Ω/V series impedance with 60% confidence level



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

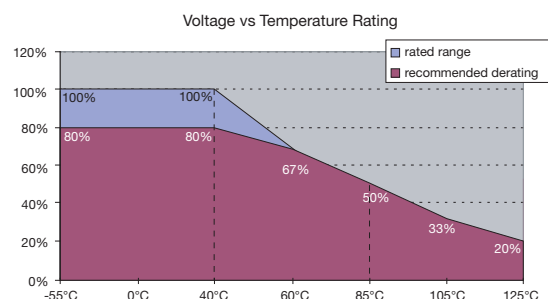
| Capacitance |      | Rated Voltage DC to 40°C / 0.5DC to 85°C / 0.2DC to 125°C |                                                     |                                                            |                                                     |         |         |
|-------------|------|-----------------------------------------------------------|-----------------------------------------------------|------------------------------------------------------------|-----------------------------------------------------|---------|---------|
| μF          | Code | 2.5V (e)                                                  | 4V (G)                                              | 6.3V (J)                                                   | 10V (A)                                             | 16V (C) | 20V (D) |
| 6.8         | 685  |                                                           |                                                     |                                                            |                                                     |         |         |
| 10          | 106  |                                                           |                                                     |                                                            | N(2500)<br>R(2000,3000)                             | S(2200) | T(1000) |
| 15          | 156  |                                                           |                                                     |                                                            | R(2000)                                             |         |         |
| 22          | 226  |                                                           |                                                     | N(5400)/R(3500)                                            | K(1800)/N(3800)<br>R(3800)                          | T(1000) |         |
| 33          | 336  |                                                           | N(8000)/R(3000)                                     | K(1700)/N(8000)<br>P(3000)/R(3000)                         | K(1500)/N(9600)<br>P(3500)<br>R(3500)/S(1500)       | T(1000) |         |
| 47          | 476  |                                                           | K(1500)/N(4000)<br>P(3000)/R(3000)                  | K(1500)/N(8300)<br>P(700,900,1800,2500)<br>R(3200)/S(1500) | A(600)/G(1500)<br>P(3200)/R(3200)<br>S(1500)/T(600) |         |         |
| 68          | 686  |                                                           | K(1200)/N(8000)<br>P(3000)<br>R(2900)/S(1500)       | A(500)/G(800)<br>K(2000)<br>S(1500)/T(600)                 | A(1500)                                             |         |         |
| 100         | 107  |                                                           | A(500)/G(800)<br>K(2000)/N(5200)<br>P(2700)/S(1400) | A(500,800)/G(800)<br>K(2000)<br>P(5400)/T(800)             | A(1400)<br>H(900)/T(900)                            |         |         |
| 150         | 157  |                                                           | A(800)/T(800)                                       | A(900)/G(2500)*<br>H(900)/T(1200)                          | B(500)<br>W(150,200)                                |         |         |
| 220         | 227  | T(1100)                                                   | A(1100)/G(3000)<br>H(900)/T(1100)                   | B(500)/T(2000)<br>W(200)                                   | F(300)                                              |         |         |
| 330         | 337  |                                                           | T(2700)/W(200)                                      | F(300)                                                     |                                                     |         |         |
| 470         | 477  |                                                           |                                                     |                                                            |                                                     |         |         |
| 680         | 687  |                                                           |                                                     | Y(100,150)                                                 |                                                     |         |         |
| 1000        | 108  |                                                           |                                                     |                                                            |                                                     |         |         |
| 1500        | 158  |                                                           |                                                     | V(100)                                                     |                                                     |         |         |

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.



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### RATINGS & PART NUMBER REFERENCE

| AVX<br>Part No.  | Case<br>Size | Capacitance<br>(μF) | Rated<br>Voltage<br>(V) | Rated<br>Temperature<br>(°C) | Category<br>Voltage<br>(V) | Category<br>Temperature<br>(°C) | Maximum<br>Surge<br>Current<br>(A) | DCL<br>(μA)<br>Max. | ESR<br>Max.<br>(mΩ)<br>@ 100kHz | MSL | 100kHz RMS Current (mA) |      |       | Product<br>Category |
|------------------|--------------|---------------------|-------------------------|------------------------------|----------------------------|---------------------------------|------------------------------------|---------------------|---------------------------------|-----|-------------------------|------|-------|---------------------|
|                  |              |                     |                         |                              |                            |                                 |                                    |                     |                                 |     | 25°C                    | 85°C | 125°C |                     |
| 2.5 Volt @ 40°C  |              |                     |                         |                              |                            |                                 |                                    |                     |                                 |     |                         |      |       |                     |
| TLJT227M002#1200 | T            | 220                 | 2.5                     | 40                           | 0.5                        | 125                             | 0.8                                | 5.5                 | 1100                            | 3   | 270                     | 243  | 108   | 2                   |
| 4 Volt @ 40°C    |              |                     |                         |                              |                            |                                 |                                    |                     |                                 |     |                         |      |       |                     |
| TLJN336M004#8000 | N            | 33                  | 4                       | 40                           | 0.8                        | 125                             | 0.2                                | 1.3                 | 8000                            | 3   | 79                      | 71   | 32    | 1                   |
| TLJR336M004#3000 | R            | 33                  | 4                       | 40                           | 0.8                        | 125                             | 0.6                                | 1.3                 | 3000                            | 3   | 135                     | 122  | 54    | 2                   |
| TLJK476M004#1500 | K            | 47                  | 4                       | 40                           | 0.8                        | 125                             | 1.0                                | 1.9                 | 1500                            | 3   | 208                     | 187  | 83    | 2                   |
| TLJN476M004#4000 | N            | 47                  | 4                       | 40                           | 0.8                        | 125                             | 0.6                                | 1.9                 | 4000                            | 3   | 112                     | 101  | 45    | 1                   |
| TLJP476M004#3000 | P            | 47                  | 4                       | 40                           | 0.8                        | 125                             | 0.6                                | 1.9                 | 3000                            | 3   | 141                     | 127  | 57    | 2                   |
| TLJR476M004#3000 | R            | 47                  | 4                       | 40                           | 0.8                        | 125                             | 0.6                                | 1.9                 | 3000                            | 3   | 135                     | 122  | 54    | 2                   |
| TLJK686M004#1200 | K            | 68                  | 4                       | 40                           | 0.8                        | 125                             | 1.2                                | 2.7                 | 1200                            | 3   | 233                     | 209  | 93    | 2                   |
| TLJN686M004#8000 | N            | 68                  | 4                       | 40                           | 0.8                        | 125                             | 0.2                                | 5.4                 | 8000                            | 3   | 79                      | 71   | 32    | 1                   |
| TLJP686M004#3000 | P            | 68                  | 4                       | 40                           | 0.8                        | 125                             | 1.2                                | 2.7                 | 3000                            | 3   | 141                     | 127  | 57    | 2                   |
| TLJR686M004#2900 | R            | 68                  | 4                       | 40                           | 0.8                        | 125                             | 0.6                                | 2.7                 | 2900                            | 3   | 138                     | 124  | 55    | 2                   |
| TLJS686M004#1500 | S            | 68                  | 4                       | 40                           | 0.8                        | 125                             | 1.0                                | 2.7                 | 1500                            | 3   | 208                     | 187  | 83    | 2                   |
| TLJA107M004#0500 | A            | 100                 | 4                       | 40                           | 0.8                        | 125                             | 2.1                                | 4.0                 | 500                             | 3   | 387                     | 349  | 155   | 1                   |
| TLJG107M004#0800 | G            | 100                 | 4                       | 40                           | 0.8                        | 125                             | 1.6                                | 4.0                 | 800                             | 3   | 296                     | 266  | 118   | 2                   |
| TLJK107M004#2000 | K            | 100                 | 4                       | 40                           | 0.8                        | 125                             | 0.8                                | 8.0                 | 2000                            | 3   | 180                     | 162  | 72    | 2                   |
| TLJN107M004#5200 | N            | 100                 | 4                       | 40                           | 0.8                        | 125                             | 0.4                                | 8.0                 | 5200                            | 3   | 98                      | 88   | 39    | 1                   |
| TLJP107M004#2700 | P            | 100                 | 4                       | 40                           | 0.8                        | 125                             | 0.6                                | 8.0                 | 2700                            | 3   | 149                     | 134  | 60    | 2                   |
| TLJS107M004#1400 | S            | 100                 | 4                       | 40                           | 0.8                        | 125                             | 1.1                                | 4.0                 | 1400                            | 3   | 215                     | 194  | 86    | 2                   |
| TLJA157M004#0800 | A            | 150                 | 4                       | 40                           | 0.8                        | 125                             | 1.6                                | 6.0                 | 800                             | 3   | 306                     | 276  | 122   | 2                   |
| TLJT157M004#0800 | T            | 150                 | 4                       | 40                           | 0.8                        | 125                             | 1.6                                | 6.0                 | 800                             | 3   | 316                     | 285  | 126   | 2                   |
| TLJA227M004#1100 | A            | 220                 | 4                       | 40                           | 0.8                        | 125                             | 1.3                                | 17.6                | 1100                            | 3   | 261                     | 235  | 104   | 2                   |
| TLJG227M004#3000 | G            | 220                 | 4                       | 40                           | 0.8                        | 125                             | 0.6                                | 17.6                | 3000                            | 3   | 153                     | 137  | 61    | 2                   |
| TLJH227M004#0900 | H            | 220                 | 4                       | 40                           | 0.8                        | 125                             | 1.5                                | 8.8                 | 900                             | 3   | 298                     | 268  | 119   | 2                   |
| TLJT227M004#1100 | T            | 220                 | 4                       | 40                           | 0.8                        | 125                             | 1.3                                | 17.6                | 1100                            | 3   | 270                     | 243  | 108   | 2                   |
| TLJT337M004#2700 | T            | 330                 | 4                       | 40                           | 0.8                        | 125                             | 0.6                                | 26.4                | 2700                            | 3   | 172                     | 155  | 69    | 2                   |
| TLJW337M004#0200 | W            | 330                 | 4                       | 40                           | 0.8                        | 125                             | 3.1                                | 13.2                | 200                             | 3   | 671                     | 604  | 268   | 1                   |
| 6.3 Volt @ 40°C  |              |                     |                         |                              |                            |                                 |                                    |                     |                                 |     |                         |      |       |                     |
| TLJN226M006#5400 | N            | 22                  | 6.3                     | 40                           | 1.3                        | 125                             | 0.5                                | 1.3                 | 5400                            | 3   | 96                      | 87   | 38    | 1                   |
| TLJR226M006#3500 | R            | 22                  | 6.3                     | 40                           | 1.3                        | 125                             | 0.8                                | 1.3                 | 3500                            | 3   | 125                     | 113  | 50    | 2                   |
| TLJK336M006#1700 | K            | 33                  | 6.3                     | 40                           | 1.3                        | 125                             | 1.5                                | 2.0                 | 1700                            | 3   | 196                     | 176  | 78    | 2                   |
| TLJN336M006#8000 | N            | 33                  | 6.3                     | 40                           | 1.3                        | 125                             | 0.4                                | 2.0                 | 8000                            | 3   | 79                      | 71   | 32    | 1                   |
| TLJP336M006#3000 | P            | 33                  | 6.3                     | 40                           | 1.3                        | 125                             | 0.9                                | 2.0                 | 3000                            | 3   | 141                     | 127  | 57    | 1                   |
| TLJR336M006#3000 | R            | 33                  | 6.3                     | 40                           | 1.3                        | 125                             | 0.9                                | 2.0                 | 3000                            | 3   | 135                     | 122  | 54    | 2                   |
| TLJK476M006#1500 | K            | 47                  | 6.3                     | 40                           | 1.3                        | 125                             | 1.6                                | 2.8                 | 1500                            | 3   | 208                     | 187  | 83    | 2                   |
| TLJN476M006#8300 | N            | 47                  | 6.3                     | 40                           | 1.3                        | 125                             | 0.4                                | 5.6                 | 8300                            | 3   | 78                      | 70   | 31    | 1                   |
| TLJP476M006#0700 | P            | 47                  | 6.3                     | 40                           | 1.3                        | 125                             | 2.7                                | 2.8                 | 700                             | 3   | 293                     | 263  | 117   | 2                   |
| TLJP476M006#0900 | P            | 47                  | 6.3                     | 40                           | 1.3                        | 125                             | 2.3                                | 2.8                 | 900                             | 3   | 258                     | 232  | 103   | 2                   |
| TLJP476M006#1800 | P            | 47                  | 6.3                     | 40                           | 1.3                        | 125                             | 1.4                                | 2.8                 | 1800                            | 3   | 183                     | 164  | 73    | 2                   |
| TLJP476M006#2500 | P            | 47                  | 6.3                     | 40                           | 1.3                        | 125                             | 1.1                                | 2.8                 | 2500                            | 3   | 155                     | 139  | 62    | 2                   |
| TLJR476M006#3200 | R            | 47                  | 6.3                     | 40                           | 1.3                        | 125                             | 0.9                                | 2.8                 | 3200                            | 3   | 131                     | 118  | 52    | 2                   |
| TLJS476M006#1500 | S            | 47                  | 6.3                     | 40                           | 1.3                        | 125                             | 1.6                                | 2.8                 | 1500                            | 3   | 208                     | 187  | 83    | 2                   |
| TLJA686M006#0500 | A            | 68                  | 6.3                     | 40                           | 1.3                        | 125                             | 3.3                                | 4.1                 | 500                             | 3   | 387                     | 349  | 155   | 1                   |
| TLJG686M006#0800 | G            | 68                  | 6.3                     | 40                           | 1.3                        | 125                             | 1.9                                | 4.1                 | 800                             | 3   | 296                     | 266  | 118   | 2                   |
| TLJK686M006#2000 | K            | 68                  | 6.3                     | 40                           | 1.3                        | 125                             | 1.3                                | 8.16                | 2000                            | 3   | 180                     | 162  | 72    | 2                   |
| TLJS686M006#1500 | S            | 68                  | 6.3                     | 40                           | 1.3                        | 125                             | 1.6                                | 4.1                 | 1500                            | 3   | 208                     | 187  | 83    | 2                   |
| TLJT686M006#0600 | T            | 68                  | 6.3                     | 40                           | 1.3                        | 125                             | 3.0                                | 4.1                 | 600                             | 3   | 365                     | 329  | 146   | 1                   |
| TLJA107M006#0500 | A            | 100                 | 6.3                     | 40                           | 1.3                        | 125                             | 3.3                                | 6.0                 | 500                             | 3   | 387                     | 349  | 155   | 2                   |
| TLJA107M006#0800 | A            | 100                 | 6.3                     | 40                           | 1.3                        | 125                             | 2.5                                | 6.0                 | 800                             | 3   | 306                     | 276  | 122   | 2                   |
| TLJG107M006#0800 | G            | 100                 | 6.3                     | 40                           | 1.3                        | 125                             | 2.5                                | 6.0                 | 800                             | 3   | 296                     | 266  | 118   | 2                   |
| TLJK107M006#2000 | K            | 100                 | 6.3                     | 40                           | 1.3                        | 125                             | 1.3                                | 12.0                | 2000                            | 3   | 180                     | 162  | 72    | 2                   |
| TLJP107M006#5400 | P            | 100                 | 6.3                     | 40                           | 1.3                        | 125                             | 0.5                                | 12.0                | 5400                            | 3   | 105                     | 95   | 42    | 2                   |
| TLJT107M006#0800 | T            | 100                 | 6.3                     | 40                           | 1.3                        | 125                             | 2.5                                | 6.0                 | 800                             | 3   | 316                     | 285  | 126   | 2                   |
| TLJA157M006#0900 | A            | 150                 | 6.3                     | 40                           | 1.3                        | 125                             | 2.3                                | 9.0                 | 900                             | 3   | 289                     | 260  | 115   | 2                   |
| TLJG157M006#2500 | G            | 150                 | 6.3                     | 40                           | 1.3                        | 125                             | 1.1                                | 18.0                | 2500                            | 3   | 167                     | 151  | 67    | 1                   |
| TLJH157M006#0900 | H            | 150                 | 6.3                     | 40                           | 1.3                        | 125                             | 2.3                                | 9.0                 | 900                             | 3   | 298                     | 268  | 119   | 2                   |
| TLJT157M006#1200 | T            | 150                 | 6.3                     | 40                           | 1.3                        | 125                             | 1.9                                | 9.0                 | 1200                            | 3   | 258                     | 232  | 103   | 2                   |
| TLJB227M006#0500 | B            | 220                 | 6.3                     | 40                           | 1.3                        | 125                             | 3.3                                | 13.2                | 500                             | 3   | 412                     | 371  | 165   | 1                   |
| TLJT227M006#2000 | T            | 220                 | 6.3                     | 40                           | 1.3                        | 125                             | 1.3                                | 26.4                | 2000                            | 3   | 200                     | 180  | 80    | 2                   |
| TLJW227M006#0200 | W            | 220                 | 6.3                     | 40                           | 1.3                        | 125                             | 4.8                                | 13.2                | 200                             | 3   | 671                     | 604  | 268   | 1                   |
| TLJF337M006#0300 | F            | 330                 | 6.3                     | 40                           | 1.3                        | 125                             | 4.2                                | 19.8                | 300                             | 3   | 577                     | 520  | 231   | 1                   |
| TLJY687M006#0100 | Y            | 680                 | 6.3                     | 40                           | 1.3                        | 125                             | 5.7                                | 40.8                | 100                             | 3   | 1118                    | 1006 | 447   | 1                   |
| TLJY687M006#0150 | Y            | 680                 | 6.3                     | 40                           | 1.3                        | 125                             | 5.7                                | 40.8                | 150                             | 3   | 913                     | 822  | 365   | 1                   |
| TLJV158M006#0100 | V            | 1500                | 6.3                     | 40                           | 1.3                        | 125                             | 5.7                                | 90                  | 100                             | 3   | 1581                    | 1423 | 632   | 1                   |

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### RATINGS & PART NUMBER REFERENCE

| AVX<br>Part No.  | Case<br>Size | Capacitance<br>(µF) | Rated<br>Voltage<br>(V) | Rated<br>Temperature<br>(°C) | Category<br>Voltage<br>(V) | Category<br>Temperature<br>(°C) | Maximum<br>Surge<br>Current<br>(A) | DCL<br>(µA)<br>Max. | ESR<br>Max.<br>(mΩ)<br>@ 100kHz | MSL | 100kHz RMS Current (mA) |      |       | Product<br>Category |
|------------------|--------------|---------------------|-------------------------|------------------------------|----------------------------|---------------------------------|------------------------------------|---------------------|---------------------------------|-----|-------------------------|------|-------|---------------------|
|                  |              |                     |                         |                              |                            |                                 |                                    |                     |                                 |     | 25°C                    | 85°C | 125°C |                     |
| 10 Volt @ 40°C   |              |                     |                         |                              |                            |                                 |                                    |                     |                                 |     |                         |      |       |                     |
| TLJN106M010#2500 | N            | 10                  | 10                      | 40                           | 2                          | 125                             | 1.7                                | 1.0                 | 2500                            | 3   | 141                     | 127  | 57    | 1                   |
| TLJR106M010#2000 | R            | 10                  | 10                      | 40                           | 2                          | 125                             | 2.0                                | 1.0                 | 2000                            | 3   | 166                     | 149  | 66    | 1                   |
| TLJR106M010#3000 | R            | 10                  | 10                      | 40                           | 2                          | 125                             | 1.4                                | 1.0                 | 3000                            | 3   | 135                     | 122  | 54    | 1                   |
| TLJR156M010#2000 | R            | 15                  | 10                      | 40                           | 2                          | 125                             | 2.0                                | 1.5                 | 2000                            | 3   | 166                     | 149  | 66    | 1                   |
| TLJK226M010#1800 | K            | 22                  | 10                      | 40                           | 2                          | 125                             | 2.2                                | 2.2                 | 1800                            | 3   | 167                     | 150  | 67    | 2                   |
| TLJN226M010#3800 | N            | 22                  | 10                      | 40                           | 2                          | 125                             | 1.2                                | 2.2                 | 3800                            | 3   | 115                     | 103  | 46    | 1                   |
| TLJR226M010#3800 | R            | 22                  | 10                      | 40                           | 2                          | 125                             | 1.2                                | 2.2                 | 3800                            | 3   | 120                     | 108  | 48    | 2                   |
| TLJK336M010#1500 | K            | 33                  | 10                      | 40                           | 2                          | 125                             | 2.6                                | 3.3                 | 1500                            | 3   | 208                     | 187  | 83    | 2                   |
| TLJN336M010#9600 | N            | 33                  | 10                      | 40                           | 2                          | 125                             | 0.5                                | 6.6                 | 9600                            | 3   | 72                      | 65   | 29    | 1                   |
| TLJP336M010#3500 | P            | 33                  | 10                      | 40                           | 2                          | 125                             | 1.3                                | 3.3                 | 3500                            | 3   | 131                     | 118  | 52    | 2                   |
| TLJR336M010#3500 | R            | 33                  | 10                      | 40                           | 2                          | 125                             | 1.3                                | 3.3                 | 3500                            | 3   | 125                     | 113  | 50    | 2                   |
| TLJS336M010#1500 | S            | 33                  | 10                      | 40                           | 2                          | 125                             | 2.6                                | 3.3                 | 1500                            | 3   | 208                     | 187  | 83    | 2                   |
| TLJA476M010#0600 | A            | 47                  | 10                      | 40                           | 2                          | 125                             | 4.8                                | 4.7                 | 600                             | 3   | 354                     | 318  | 141   | 1                   |
| TLJG476M010#1500 | G            | 47                  | 10                      | 40                           | 2                          | 125                             | 2.6                                | 4.7                 | 1500                            | 3   | 216                     | 194  | 86    | 2                   |
| TLJP476M010#3200 | P            | 47                  | 10                      | 40                           | 2                          | 125                             | 1.4                                | 4.7                 | 3200                            | 3   | 137                     | 123  | 55    | 2                   |
| TLJR476M010#3200 | R            | 47                  | 10                      | 40                           | 2                          | 125                             | 1.4                                | 9.4                 | 3200                            | 3   | 131                     | 118  | 52    | 2                   |
| TLJS476M010#1500 | S            | 47                  | 10                      | 40                           | 2                          | 125                             | 2.6                                | 4.7                 | 1500                            | 3   | 208                     | 187  | 83    | 2                   |
| TLJT476M010#0600 | T            | 47                  | 10                      | 40                           | 2                          | 125                             | 4.8                                | 4.7                 | 600                             | 3   | 365                     | 329  | 146   | 1                   |
| TLJA686M010#1500 | A            | 68                  | 10                      | 40                           | 2                          | 125                             | 2.6                                | 6.8                 | 1500                            | 3   | 224                     | 201  | 89    | 2                   |
| TLJA107M010#1400 | A            | 100                 | 10                      | 40                           | 2                          | 125                             | 2.7                                | 10.0                | 1400                            | 3   | 231                     | 208  | 93    | 2                   |
| TLJH107M010#0900 | H            | 100                 | 10                      | 40                           | 2                          | 125                             | 3.7                                | 10.0                | 900                             | 3   | 298                     | 268  | 119   | 2                   |
| TLJT107M010#0900 | T            | 100                 | 10                      | 40                           | 2                          | 125                             | 3.7                                | 10.0                | 900                             | 3   | 298                     | 268  | 119   | 2                   |
| TLJB157M010#0500 | B            | 150                 | 10                      | 40                           | 2                          | 125                             | 5.3                                | 15.0                | 500                             | 3   | 412                     | 371  | 165   | 1                   |
| TLJW157M010#0150 | W            | 150                 | 10                      | 40                           | 2                          | 125                             | 8.3                                | 15.0                | 150                             | 3   | 775                     | 697  | 310   | 1                   |
| TLJW157M010#0200 | W            | 150                 | 10                      | 40                           | 2                          | 125                             | 7.7                                | 15.0                | 200                             | 3   | 671                     | 604  | 268   | 1                   |
| TLJF227M010#0300 | F            | 220                 | 10                      | 40                           | 2                          | 125                             | 6.7                                | 22.0                | 300                             | 3   | 577                     | 520  | 231   | 1                   |
| 16 Volt @ 40°C   |              |                     |                         |                              |                            |                                 |                                    |                     |                                 |     |                         |      |       |                     |
| TLJS106M016#2200 | S            | 10                  | 16                      | 40                           | 3.2                        | 125                             | 3.0                                | 1.6                 | 2200                            | 3   | 172                     | 155  | 69    | 1                   |
| TLJT226M016#1000 | T            | 22                  | 16                      | 40                           | 3.2                        | 125                             | 5.5                                | 3.5                 | 1000                            | 3   | 283                     | 255  | 113   | 1                   |
| TLJT336M016#1000 | T            | 33                  | 16                      | 40                           | 3.2                        | 125                             | 5.5                                | 5.3                 | 1000                            | 3   | 283                     | 255  | 113   | 1                   |
| 20 Volt @ 40°C   |              |                     |                         |                              |                            |                                 |                                    |                     |                                 |     |                         |      |       |                     |
| TLJT106M020#1000 | T            | 10                  | 20                      | 40                           | 4                          | 125                             | 6.9                                | 2.0                 | 1000                            | 3   | 283                     | 255  | 113   | 1                   |

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

All technical data relates to an ambient temperature of +25°C. Capacitance is measured at 120Hz, 0.5V RMS with a maximum DC bias of 2.2 volts. DCL is measured at rated voltage after 5 minutes.

ESR allowed to move up to 1.25 times catalogue limit post mounting

DCL allowed to move up to 2.00 times catalogue limit post mounting

For typical weight and composition see page 214.

**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.**

## Tantalum Solid Electrolytic Chip Capacitors High CV Consumer Series

### QUALIFICATION TABLE – CATEGORY 1

| TEST                  | TLJ series (Temperature range -55°C to +125°C)                                                                                                                                                                                                                                                |               |               |                    |                              |       |            |           |            |            |            |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---------------|--------------------|------------------------------|-------|------------|-----------|------------|------------|------------|
|                       | Condition                                                                                                                                                                                                                                                                                     |               |               | Characteristics    |                              |       |            |           |            |            |            |
| Endurance             | Determine after application of rated voltage for 2000 +48/-0 hours at 40±2°C and then leaving 1-2 hours at room temperature. Also determine of 85°C temperature, category voltage for 2000 +48/-0 hours and then leaving 1-2 hours at room temperature. Power supply impedance to be ≤0.1Ω/V. |               |               | Visual examination | no visible damage            |       |            |           |            |            |            |
|                       |                                                                                                                                                                                                                                                                                               |               |               | DCL                | 2 x initial limit            |       |            |           |            |            |            |
|                       |                                                                                                                                                                                                                                                                                               |               |               | ΔC/C               | within ±10% of initial value |       |            |           |            |            |            |
|                       |                                                                                                                                                                                                                                                                                               |               |               | ESR                | 1.25 x initial limit         |       |            |           |            |            |            |
| Humidity              | Determine after storage without applied voltage at 65±2°C and 90-95% relative humidity for 500hrs and then recovery 1-2 hours at room temperature                                                                                                                                             |               |               | Visual examination | no visible damage            |       |            |           |            |            |            |
|                       |                                                                                                                                                                                                                                                                                               |               |               | DCL                | 2 x initial limit            |       |            |           |            |            |            |
|                       |                                                                                                                                                                                                                                                                                               |               |               | ΔC/C               | within ±10% of initial value |       |            |           |            |            |            |
|                       |                                                                                                                                                                                                                                                                                               |               |               | ESR                | 1.25 x initial limit         |       |            |           |            |            |            |
| Temperature Stability | Step                                                                                                                                                                                                                                                                                          | Temperature°C | Duration(min) |                    | +20°C                        | -55°C | +20°C      | +85°C     | +125°C     | +20°C      |            |
|                       | 1                                                                                                                                                                                                                                                                                             | +20±2         | 15            | DCL                | 2 x IL*                      | n/a   | 2 x IL*    | 20 x IL*  | 25 x IL*   | IL*        |            |
|                       | 2                                                                                                                                                                                                                                                                                             | -55+0/-3      | 15            |                    | ΔC/C                         | n/a   | +0/-20%    | ±5%       | +20/-0%    | +25/-0%    | ±5%        |
|                       | 3                                                                                                                                                                                                                                                                                             | +20±2         | 15            |                    |                              | ESR   | 1.25 x IL* | 2.5 x IL* | 1.25 x IL* | 1.25 x IL* | 1.25 x IL* |
|                       | 4                                                                                                                                                                                                                                                                                             | +85+3/-0      | 15            |                    |                              |       |            |           |            |            |            |
|                       | 5                                                                                                                                                                                                                                                                                             | +125+3/-0     | 15            |                    |                              |       |            |           |            |            |            |
|                       | 6                                                                                                                                                                                                                                                                                             | +20±2         | 15            |                    |                              |       |            |           |            |            |            |
| Surge Voltage         | Test temperature: 40°C+3/0°C<br>Test voltage: 1.3 x rated voltage<br>Series protection resistance 1000±100Ω<br>Discharge resistance: 1000Ω<br>Number of cycles: 1000x<br>Cycle duration: 6 min; 30 sec charge,<br>5 min 30 sec discharge                                                      |               |               | Visual examination | no visible damage            |       |            |           |            |            |            |
|                       |                                                                                                                                                                                                                                                                                               |               |               | DCL                | 2 x initial limit            |       |            |           |            |            |            |
|                       |                                                                                                                                                                                                                                                                                               |               |               | ΔC/C               | within ±5% of initial value  |       |            |           |            |            |            |
|                       |                                                                                                                                                                                                                                                                                               |               |               | ESR                | 1.25 x initial limit         |       |            |           |            |            |            |

\*Initial Limit

### QUALIFICATION TABLE – CATEGORY 2

| TEST                  | TLJ series (Temperature range -55°C to +125°C)                                                                                                                                                                                                                                                |               |               |                    |                                 |           |            |            |            |            |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---------------|--------------------|---------------------------------|-----------|------------|------------|------------|------------|
|                       | Condition                                                                                                                                                                                                                                                                                     |               |               | Characteristics    |                                 |           |            |            |            |            |
| Endurance             | Determine after application of rated voltage for 2000 +48/-0 hours at 40±2°C and then leaving 1-2 hours at room temperature. Also determine of 85°C temperature, category voltage for 2000 +48/-0 hours and then leaving 1-2 hours at room temperature. Power supply impedance to be ≤0.1Ω/V. |               |               | Visual examination | no visible damage               |           |            |            |            |            |
|                       |                                                                                                                                                                                                                                                                                               |               |               | DCL                | 2 x initial limit               |           |            |            |            |            |
|                       |                                                                                                                                                                                                                                                                                               |               |               | ΔC/C               | within +5/-30% of initial value |           |            |            |            |            |
|                       |                                                                                                                                                                                                                                                                                               |               |               | ESR                | 1.25 x initial limit            |           |            |            |            |            |
| Humidity              | Determine after storage without applied voltage at 65±2°C and 90-95% relative humidity for 500hrs and then recovery 1-2 hours at room temperature                                                                                                                                             |               |               | Visual examination | no visible damage               |           |            |            |            |            |
|                       |                                                                                                                                                                                                                                                                                               |               |               | DCL                | 2 x initial limit               |           |            |            |            |            |
|                       |                                                                                                                                                                                                                                                                                               |               |               | ΔC/C               | within ±10% of initial value    |           |            |            |            |            |
|                       |                                                                                                                                                                                                                                                                                               |               |               | ESR                | 1.25 x initial limit            |           |            |            |            |            |
| Temperature Stability | Step                                                                                                                                                                                                                                                                                          | Temperature°C | Duration(min) |                    | +20°C                           | -55°C     | +20°C      | +85°C      | +125°C     | +20°C      |
|                       | 1                                                                                                                                                                                                                                                                                             | +20±2         | 15            | DCL                | 2 x IL*                         | n/a       | 2 x IL*    | 20 x IL*   | 25 x IL*   | 2 x IL*    |
|                       | 2                                                                                                                                                                                                                                                                                             | -55+0/-3      | 15            |                    | ΔC/C                            | n/a       | +5/-20%    | ±10%       | +20/-0%    | +25/-0%    |
|                       | 3                                                                                                                                                                                                                                                                                             | +20±2         | 15            | ESR                | 1.25 xIL*                       | 2.5 x IL* | 1.25 x IL* | 1.25 x IL* | 1.25 x IL* | 1.25 x IL* |
|                       | 4                                                                                                                                                                                                                                                                                             | +85+3/-0      | 15            |                    |                                 |           |            |            |            |            |
|                       | 5                                                                                                                                                                                                                                                                                             | +125+3/-0     | 15            |                    |                                 |           |            |            |            |            |
|                       | 6                                                                                                                                                                                                                                                                                             | +20±2         | 15            |                    |                                 |           |            |            |            |            |
| Surge Voltage         | Test temperature: 40°C+3/0°C<br>Test voltage: 1.3 x rated voltage<br>Series protection resistance 1000±100Ω<br>Discharge resistance: 1000Ω<br>Number of cycles: 1000x<br>Cycle duration: 6 min; 30 sec charge, 5 min 30 sec discharge                                                         |               |               | Visual examination | no visible damage               |           |            |            |            |            |
|                       |                                                                                                                                                                                                                                                                                               |               |               | DCL                | 2 x initial limit               |           |            |            |            |            |
|                       |                                                                                                                                                                                                                                                                                               |               |               | ΔC/C               | within ±5% of initial value     |           |            |            |            |            |
|                       |                                                                                                                                                                                                                                                                                               |               |               | ESR                | 1.25 x initial limit            |           |            |            |            |            |

\*Initial Limit