

## FEATURES

- Approved per MIL-C-39003/02
- Capacitance values .0047 – 22 $\mu$ F
- $\pm 20\%$ ;  $\pm 10\%$  and  $\pm 5\%$  Capacitance Tolerances
- 6 – 125 Volts
- Ultra-miniature size

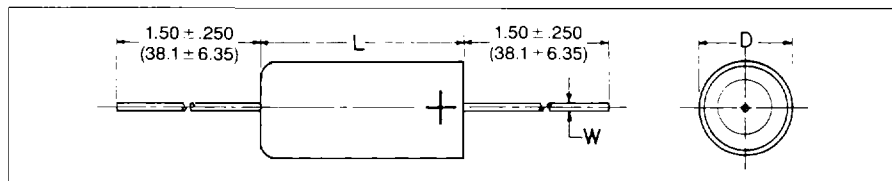
## CAPACITOR OUTLINE DRAWINGS

## T120 CAPACITOR MARKING

## A &amp; B Case

|             |                                                          |
|-------------|----------------------------------------------------------|
| +T120       | — Polarity, Series                                       |
| K 20%       | — Manufacturer's Identification, Cap. Tolerance          |
| 6R8 $\mu$ F | — Nominal Capacitance - $\mu$ F (R denotes decima point) |
| 15V         | — Voltage                                                |
| 433XA       | — Date Code, Batch Code                                  |

For Military marking refer to page 35.



## DIMENSIONS – INCHES &amp; (MILLIMETERS)

| CASE SIZE | UNINSULATED                       |                                                    | INSULATED                        |                                                    | W<br>WIRE<br>DIAMETER                             |
|-----------|-----------------------------------|----------------------------------------------------|----------------------------------|----------------------------------------------------|---------------------------------------------------|
|           | D<br>$\pm 0.005$<br>( $\pm .13$ ) | L                                                  | D                                | L                                                  |                                                   |
| A         | .085 (2.16)                       | .245 $\pm$ .015 (6.22 $\pm$ .38)<br>— .010 (— .25) | .090 $\pm$ .009 (2.29 $\pm$ .23) | .250 $\pm$ .031 (6.35 $\pm$ .79)<br>— .015 (— .38) | .016 $\pm$ .005 (.41 $\pm$ .13)<br>— .001 (— .03) |
| B         | .127 (3.23)                       | .375 $\pm$ .015 (9.53 $\pm$ .38)                   | .138 $\pm$ .010 (3.51 $\pm$ .25) | .390 $\pm$ .015 (9.91 $\pm$ .38)                   | .016 $\pm$ .005 (.41 $\pm$ .13)<br>— .001 (— .03) |

## CAPACITANCE RATING CHART

T120 – All values listed

MIL-C-39003/02 T222 (CSR09) – Bold type values *Only*

| CAPACITANCE |      | CASE SIZE | *RATED VOLTAGE $\mu$ 85° C. |           |           |           |           |           |           |           | CASE SIZE |     |
|-------------|------|-----------|-----------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----|
| $\mu$ F     | CODE |           | 6                           | 10        | 15        | 20        | 35        | 50        | 75        | 100       |           | 125 |
| .0047       | 472  | A         |                             |           |           |           | A (0.6) 3 | A (0.6) 3 | A (0.6) 3 | A (1.0) 3 | A (1.0) 3 | A   |
| .0056       | 562  |           |                             |           |           |           | A (0.6) 3 | A (0.6) 3 | A (0.6) 3 | A (1.0) 3 | A (1.0) 3 |     |
| .0068       | 682  |           |                             |           |           |           | A (0.6) 3 | A (0.6) 3 | A (0.6) 3 | A (1.0) 3 | A (1.0) 3 |     |
| .0082       | 822  |           |                             |           |           |           | A (0.6) 3 | A (0.6) 3 | A (0.6) 3 | A (1.0) 3 | A (1.0) 3 |     |
| .010        | 103  |           |                             |           |           |           | A (0.6) 3 | A (0.6) 3 | A (0.6) 3 | A (1.0) 3 | A (1.0) 3 |     |
| .012        | 123  |           |                             |           |           |           | A (0.6) 3 | A (0.6) 3 | A (0.6) 3 | A (1.0) 3 | A (1.0) 3 |     |
| .015        | 153  |           |                             |           |           |           | A (0.6) 3 | A (0.6) 3 | A (0.6) 3 | A (1.0) 3 | A (1.0) 3 |     |
| .018        | 183  |           |                             |           |           |           | A (0.6) 3 | A (0.6) 3 | A (0.6) 3 | A (1.0) 3 | A (1.0) 3 |     |
| .022        | 223  |           |                             |           |           |           | A (0.6) 3 | A (0.6) 3 | A (0.6) 3 | A (1.0) 3 | A (1.0) 3 |     |
| .027        | 273  |           |                             |           |           |           | A (0.6) 3 | A (0.6) 3 | A (0.6) 3 | A (1.0) 3 | A (1.0) 3 |     |
| .033        | 333  |           |                             |           |           |           | A (0.6) 3 | A (0.6) 3 | A (0.6) 3 | A (1.0) 3 | A (1.0) 3 |     |
| .039        | 393  |           |                             |           |           |           | A (0.6) 3 | A (0.6) 3 | A (0.6) 3 | A (1.0) 3 | A (1.0) 3 |     |
| .047        | 473  |           |                             |           |           |           | A (0.6) 3 | A (0.6) 3 | A (0.6) 3 | A (1.0) 3 | A (1.0) 3 |     |
| .056        | 563  |           |                             |           |           |           | A (0.6) 3 | A (0.6) 3 | A (0.6) 3 | A (1.0) 3 | A (1.0) 3 |     |
| .068        | 683  |           |                             |           |           |           | A (0.6) 3 | A (0.6) 3 | A (1.0) 3 | A (1.0) 3 | A (1.0) 3 |     |
| .082        | 823  |           |                             |           |           |           | A (0.6) 3 | A (0.6) 3 | A (0.6) 3 | A (1.0) 3 | A (1.0) 3 |     |
| 0.10        | 104  |           |                             |           |           | A (0.6) 3 | A (0.6) 3 | A (0.6) 3 | A (0.6) 3 | A (1.0) 3 | A (1.0) 3 |     |
| 0.12        | 124  |           |                             |           |           | A (0.6) 3 | A (0.6) 3 | A (0.6) 3 | A (0.6) 3 | A (1.0) 3 | B (2.5) 3 |     |
| 0.15        | 154  |           |                             |           |           | A (0.6) 3 | A (0.6) 3 | A (0.6) 3 | A (0.6) 3 | B (2.5) 3 | B (2.5) 3 |     |
| 0.18        | 184  |           |                             |           |           | A (0.6) 3 | A (0.6) 3 | A (0.6) 3 | A (0.6) 3 | B (2.5) 3 | B (2.5) 3 |     |
| 0.22        | 224  |           |                             | A (0.6) 6 |           | A (0.6) 3 | A (0.6) 3 | A (0.6) 3 | A (0.6) 3 | B (2.5) 3 | B (2.5) 3 |     |
| 0.27        | 274  |           |                             | A (0.6) 6 |           | A (0.6) 3 | A (0.6) 3 | A (0.6) 3 | A (0.6) 3 | B (2.5) 3 | B (2.5) 3 |     |
| 0.33        | 334  |           |                             | A (0.6) 6 | A (0.6) 6 | A (0.6) 3 | A (0.6) 3 | B (1.4) 3 | B (0.6) 3 | B (2.5) 3 | B (2.5) 3 |     |
| 0.39        | 394  |           |                             | A (0.6) 6 | A (0.6) 6 | A (0.6) 3 | A (0.6) 3 | B (1.4) 3 | B (0.6) 3 | B (2.5) 3 | B (2.5) 3 |     |
| 0.47        | 474  |           |                             | A (0.6) 6 | A (0.6) 6 | A (0.6) 3 | A (0.6) 3 | B (1.4) 3 | B (0.6) 3 | B (2.5) 3 | B (2.5) 3 |     |
| 0.56        | 564  |           |                             | A (0.6) 6 | A (0.6) 6 | A (0.6) 3 | A (0.6) 3 | B (1.4) 3 | B (0.6) 3 | B (2.5) 3 | B (2.5) 3 |     |
| 0.68        | 684  |           |                             | A (0.6) 6 | A (0.6) 6 | A (0.6) 3 | B (1.0) 3 | B (1.4) 3 | B (0.6) 3 | B (2.5) 3 | B (2.5) 3 |     |
| 0.82        | 824  |           |                             | A (0.6) 6 | A (0.6) 6 | A (0.6) 3 | B (1.0) 3 | B (1.4) 3 | B (0.7) 3 | B (2.5) 3 |           |     |
| 1.0         | 105  |           |                             | A (0.6) 6 | A (0.6) 6 | A (0.6) 3 | B (1.0) 3 | B (1.4) 3 | B (0.9) 3 |           |           |     |
| 1.2         | 125  |           |                             | A (0.6) 6 | A (0.6) 6 | A (0.6) 6 | B (1.0) 3 | B (1.0) 3 | B (1.4) 3 | B (0.9) 3 |           |     |
| 1.5         | 155  |           |                             | A (0.6) 6 | A (0.6) 6 | A (0.6) 6 | B (1.0) 3 | B (1.0) 3 | B (1.4) 3 |           |           |     |
| 1.8         | 185  |           |                             | A (0.6) 6 | A (0.6) 6 | B (1.8) 6 | B (1.0) 3 | B (1.0) 3 | B (1.4) 3 |           |           |     |
| 2.2         | 225  |           |                             | A (0.6) 6 | A (0.6) 6 | B (1.8) 6 | B (1.0) 3 | B (1.4) 3 |           |           |           |     |
| 2.7         | 275  |           |                             | A (0.6) 6 |           | B (1.8) 6 | B (1.0) 3 | B (1.4) 3 |           |           |           |     |
| 3.3         | 335  |           |                             | A (0.6) 6 | B (2.0) 6 | B (1.8) 6 | B (1.0) 3 |           |           |           |           |     |
| 3.9         | 395  | B         |                             | B (2.0) 6 | B (1.8) 6 | B (2.0) 3 |           |           |           |           |           |     |
| 4.7         | 475  |           |                             | B (2.0) 6 | B (1.8) 6 | B (2.0) 3 |           |           |           |           |           |     |
| 5.6         | 565  |           |                             | B (2.0) 6 | B (1.8) 6 | B (2.0) 3 |           |           |           |           |           |     |
| 6.8         | 685  |           |                             | B (2.0) 6 | B (1.8) 6 | B (2.0) 3 |           |           |           |           |           |     |
| 8.2         | 825  |           |                             | B (1.4) 6 | B (2.0) 6 | B (1.8) 6 |           |           |           |           |           |     |
| 10.0        | 106  |           |                             | B (1.4) 6 | B (2.0) 6 |           |           |           |           |           |           |     |
| 12.0        | 126  |           |                             | B (1.4) 6 | B (2.0) 6 |           |           |           |           |           |           |     |
| 15.0        | 156  |           |                             | B (1.4) 6 | B (2.0) 6 |           |           |           |           |           |           |     |
| 18.0        | 186  |           |                             | B (1.4) 6 | B (3.0) 6 |           |           |           |           |           |           |     |
| 22.0        | 226  |           |                             | B (2.0) 6 |           |           |           |           |           |           |           |     |

\*LETTER – Case Size

(1st #) – Max. D.C. Leakage  $\mu$ A @ 25°C

2nd # – Max. D.F. % @ 25°C, 120 Hz

\*M39003/02 (T222) is not available in all capacitance values nor in 100 or 125 volts. Consult Tantalum Hermetically Sealed Catalog F-1851 for specific capacitance values and tolerances available.

For ordering information, see page 22.

For packaging information, see page 50.