

## Wet Tantalum Capacitors Cylindrical Body, Hermetically Sealed



### FEATURES

- High temperature
- High voltage
- High capacitance
- Withstands high frequency vibration to 2000 Hz
- Hermetically sealed
- Long shelf life
- DSCC drawings 04032 and 04033
- Various termination options: Standard 100 % tin (RoHS compliant), tin/lead (Sn/Pb) available
- Mounting: Arrays and assemblies
- Material categorization: For definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



### PERFORMANCE CHARACTERISTICS

**Operating Temperature:** - 55 °C to + 175 °C with proper derating

**Voltage Range:** 8 V<sub>DC</sub> to 630 V<sub>DC</sub> at 85 °C

**Reverse Voltage:** None

**Capacitance Range:** 2 μF to 2200 μF

**Tolerance Range:**

- 15 % to + 50 % (standard for XTK, XTM, XTV)

- 15 % to + 75 % (standard for XTH, XTL)

± 20 % (special order)

### Note

\* This datasheet provides information about parts that are RoHS-compliant and/or parts that are non-RoHS-compliant. For example, parts with lead (Pb) terminations are not RoHS-compliant. Please see the information/tables in this datasheet for details.

| ORDERING INFORMATION            |  |   |  |   |   |                        |   |
|---------------------------------|--|---|--|---|---|------------------------|---|
| XTV                             | 126  | T   | 630  | P   | 0   | A                      | RoHS COMPLIANT  |
| MODEL                           | CAPACITANCE CODE   | CAPACITANCE TOLERANCE   | DC VOLTAGE RATING  | CASE CODE   | INSULATION  | TERMINAL CONFIGURATION |   |
| XTH<br>XTK<br>XTL<br>XTM<br>XTV | This is expressed in picofarads. The first two digits are the significant figures. The third is the number of zeros to follow. | T = - 15 % to + 50 % (XTK, XTM, XTV standard)<br>U = - 15 % to + 75 % (XTH, XTL standard)<br>M = ± 20 % (special order) | This is expressed in volts. To complete the three-digit block, zeros precede the voltage rating. | P = Polar (case negative)<br>R = Reverse polarity (case positive) | 0 = Uninsulated (standard)<br>4 = Teflon (+ 175 °C limit) | See Styles             | Blank = 100 % tin (RoHS compliant design)<br>8 = 60/40 solder (tin/lead termination design) |

### Note

- For styles, terminal configurations, mounting methods and hardware, please see pages following Standard Ratings table

| DIMENSIONS in inches [millimeters] |                       |
|------------------------------------|-----------------------|
| <p><b>XTH-XTL-XTV</b></p>          | <p><b>XTK-XTM</b></p> |
| <b>TYPE</b>                        | <b>D</b>              |
| XTK - XTM                          | 0.656                 |
| XTL - XTH                          | 0.875                 |
| XTV                                | 1.125                 |
|                                    | <b>H</b>              |
|                                    | 0.438 to 1.781        |
|                                    | 0.540 to 4.062        |
|                                    | 0.600 to 2.810        |



| STANDARD RATINGS AND DIMENSIONS         |                      |    |                          |                                      |     |     |                                  |                                    |     |     |                       |   |       |       |                 |
|---|----------------------|----|--------------------------|--------------------------------------|-----|-----|----------------------------------|------------------------------------|-----|-----|-----------------------|---|-------|-------|-----------------|
| CAPACITANCE<br>( $\mu$ F)               | MAX. WORKING VOLTAGE |    | TYP. ESR<br>( $\Omega$ ) | MAX. DCL AT MAX. $V_{DC}$ ( $\mu$ A) |     |     | MAX. Z<br>-55 °C<br>( $\Omega$ ) | MAX. % CAP. CHANGE FROM ROOM TEMP. |     |     | APPROX. WEIGHT<br>(g) | MAX. RIPPLE<br>120 Hz<br>RMS<br>-55 °C<br>TO<br>+175 °C<br>(mA) | SIZE  |       | PART NUMBER     |
|   | +125 °C +175 °C      |    |                          | +85 °C +125 °C +175 °C               |     |     |                                  | -55 °C +85 °C +175 °C              |     |     |                       |   | D     | H     |                 |
| <b>8 <math>V_{DC}</math> AT +85 °C</b>  |                      |    |                          |                                      |     |     |                                  |                                    |     |     |                       |   |       |       |                 |
| 70                                      | 7                    | 5  | 10.0                     | 30                                   | 45  | 60  | 60                               | -60                                | +30 | +30 | 14                    | 137   | 0.656 | 0.438 | XTK706(1)008POA |
| 140                                     | 7                    | 5  | 5.0                      | 50                                   | 75  | 100 | 30                               | -60                                | +30 | +30 | 15                    | 213   | 0.656 | 0.562 | XTM147(1)008POA |
| <b>10 <math>V_{DC}</math> AT +85 °C</b> |                      |    |                          |                                      |     |     |                                  |                                    |     |     |                       |   |       |       |                 |
| 50                                      | 8.5                  | 7  | 10.0                     | 25                                   | 37  | 50  | 75                               | -60                                | +30 | +30 | 14                    | 137   | 0.656 | 0.438 | XTK506(1)010POA |
| 100                                     | 8.5                  | 7  | 5.0                      | 45                                   | 67  | 90  | 40                               | -60                                | +30 | +30 | 15                    | 213   | 0.656 | 0.562 | XTM107(1)010POA |
| <b>12 <math>V_{DC}</math> AT +85 °C</b> |                      |    |                          |                                      |     |     |                                  |                                    |     |     |                       |   |       |       |                 |
| 580                                     | 10                   | 8  | 1.5                      | 135                                  | 197 | 270 | 20                               | -90                                | +20 | +35 | 48                    | 550   | 1.125 | 0.600 | XTV587(1)012P0A |
| 850                                     | 10                   | 8  | 1.5                      | 135                                  | 197 | 270 | 20                               | -90                                | +20 | +35 | 50                    | 550   | 1.125 | 0.600 | XTV857(1)012P0A |
| 1100                                    | 10                   | 8  | 1.5                      | 135                                  | 197 | 270 | 20                               | -90                                | +20 | +35 | 60                    | 694   | 1.125 | 1.100 | XTV118(1)012P0A |
| 2200                                    | 10                   | 8  | 1.5                      | 135                                  | 197 | 270 | 20                               | -90                                | +20 | +35 | 82                    | 694   | 1.125 | 1.100 | XTV228(1)012P0A |
| <b>18 <math>V_{DC}</math> AT +85 °C</b> |                      |    |                          |                                      |     |     |                                  |                                    |     |     |                       |   |       |       |                 |
| 35                                      | 15                   | 12 | 10.0                     | 30                                   | 45  | 60  | 85                               | -60                                | +30 | +30 | 14                    | 137   | 0.656 | 0.438 | XTK356(1)018P0A |
| 70                                      | 15                   | 12 | 5.0                      | 50                                   | 75  | 100 | 45                               | -60                                | +30 | +30 | 15                    | 213   | 0.656 | 0.562 | XTM706(1)018P0A |
| 120                                     | 15                   | 12 | 2.8                      | 50                                   | 75  | 100 | 30                               | -60                                | +15 | +40 | 26                    | 328   | 0.875 | 0.540 | XTL127(1)018P0A |
| 240                                     | 15                   | 12 | 2.5                      | 80                                   | 120 | 160 | 20                               | -60                                | +15 | +40 | 32                    | 390   | 0.875 | 0.732 | XTH247(1)018P0A |
| 390                                     | 15                   | 12 | 1.5                      | 165                                  | 227 | 330 | 20                               | -85                                | +20 | +35 | 48                    | 550   | 1.125 | 0.600 | XTV397(1)018P0A |
| 560                                     | 15                   | 12 | 1.5                      | 165                                  | 227 | 330 | 20                               | -85                                | +20 | +35 | 50                    | 550   | 1.125 | 0.600 | XTV567(1)018P0A |
| 900                                     | 15                   | 12 | 1.5                      | 165                                  | 227 | 330 | 20                               | -85                                | +20 | +35 | 68                    | 694   | 1.125 | 1.100 | XTV907(1)018P0A |
| 1800                                    | 15                   | 12 | 1.5                      | 165                                  | 227 | 330 | 20                               | -85                                | +20 | +35 | 82                    | 694   | 1.125 | 1.100 | XTV188(1)018P0A |
| <b>20 <math>V_{DC}</math> AT +85 °C</b> |                      |    |                          |                                      |     |     |                                  |                                    |     |     |                       |   |       |       |                 |
| 28                                      | 17.5                 | 13 | 10.0                     | 30                                   | 45  | 60  | 85                               | -60                                | +30 | +30 | 14                    | 137   | 0.656 | 0.438 | XTK286(1)020P0A |
| 56                                      | 17.5                 | 13 | 5.0                      | 50                                   | 75  | 100 | 45                               | -60                                | +30 | +30 | 15                    | 213   | 0.656 | 0.562 | XTM566(1)020P0A |
| 100                                     | 17.5                 | 13 | 2.8                      | 50                                   | 75  | 100 | 30                               | -60                                | +15 | +40 | 26                    | 328   | 0.875 | 0.540 | XTL107(1)020P0A |
| 200                                     | 17.5                 | 13 | 2.5                      | 80                                   | 120 | 160 | 20                               | -60                                | +15 | +40 | 32                    | 390   | 0.875 | 0.732 | XTH207(1)020P0A |
| <b>30 <math>V_{DC}</math> AT +85 °C</b> |                      |    |                          |                                      |     |     |                                  |                                    |     |     |                       |   |       |       |                 |
| 20                                      | 25                   | 20 | 10.0                     | 35                                   | 52  | 70  | 125                              | -40                                | +20 | +20 | 14                    | 137   | 0.656 | 0.438 | XTK206(1)030P0A |
| 40                                      | 25                   | 20 | 5.0                      | 60                                   | 90  | 120 | 75                               | -40                                | +20 | +20 | 15                    | 213   | 0.656 | 0.562 | XTM406(1)030P0A |
| 75                                      | 25                   | 20 | 2.7                      | 55                                   | 82  | 110 | 45                               | -45                                | +15 | +30 | 26                    | 333   | 0.875 | 0.540 | XTL756(1)030P0A |
| 150                                     | 25                   | 20 | 2.7                      | 90                                   | 135 | 180 | 30                               | -45                                | +15 | +30 | 32                    | 375   | 0.875 | 0.732 | XTH157(1)030P0A |
| 250                                     | 25                   | 20 | 2.5                      | 195                                  | 287 | 390 | 20                               | -65                                | +20 | +35 | 48                    | 427   | 1.125 | 0.600 | XTV257(1)030P0A |
| 370                                     | 25                   | 20 | 1.5                      | 125                                  | 170 | 215 | 15                               | -65                                | +20 | +35 | 50                    | 550   | 1.125 | 0.600 | XTV377(1)030P0A |
| 650                                     | 25                   | 20 | 1.5                      | 145                                  | 202 | 250 | 15                               | -85                                | +20 | +35 | 68                    | 694   | 1.125 | 1.100 | XTV657(1)030P0A |
| 1300                                    | 25                   | 20 | 1.5                      | 190                                  | 282 | 375 | 10                               | -85                                | +20 | +35 | 82                    | 694   | 1.125 | 1.100 | XTV138(1)030P0A |
| <b>35 <math>V_{DC}</math> AT +85 °C</b> |                      |    |                          |                                      |     |     |                                  |                                    |     |     |                       |   |       |       |                 |
| 20                                      | 30                   | 23 | 10.0                     | 35                                   | 52  | 72  | 125                              | -40                                | +20 | +20 | 14                    | 137   | 0.656 | 0.438 | XTK206(1)035P0A |
| 40                                      | 30                   | 23 | 5.0                      | 60                                   | 90  | 120 | 75                               | -40                                | +20 | +20 | 15                    | 213   | 0.656 | 0.562 | XTM406(1)035P0A |
| 60                                      | 30                   | 23 | 2.7                      | 55                                   | 82  | 110 | 45                               | -45                                | +10 | +30 | 26                    | 333   | 0.875 | 0.540 | XTL606(1)035P0A |

**Note**

- Part number definitions:
  - (1) Tolerance code:
    - T = -15 % to +50 % (standard for XTK, XTM, XTV)
    - U = -15 % to +75 % (standard for XTH, XTL)
    - M =  $\pm$  20 % (available by special order)



| STANDARD RATINGS AND DIMENSIONS     |                      |         |                          |                                      |         |         |                                  |                                    |        |         |                       |   |                       |                       |                 |
|-------------------------------------|----------------------|---------|--------------------------|--------------------------------------|---------|---------|----------------------------------|------------------------------------|--------|---------|-----------------------|---|-----------------------|-----------------------|-----------------|
| CAPACITANCE<br>( $\mu$ F)           | MAX. WORKING VOLTAGE |         | TYP. ESR<br>( $\Omega$ ) | MAX. DCL AT MAX. $V_{DC}$ ( $\mu$ A) |         |         | MAX. Z<br>-55 °C<br>( $\Omega$ ) | MAX. % CAP. CHANGE FROM ROOM TEMP. |        |         | APPROX. WEIGHT<br>(g) | MAX. RIPPLE<br>120 Hz<br>RMS<br>-55 °C<br>TO<br>+175 °C<br>(mA) | SIZE                  |                       | PART NUMBER     |
|                                     | +125 °C              | +175 °C |                          | +85 °C                               | +125 °C | +175 °C |                                  | -55 °C                             | +85 °C | +175 °C |                       |   | D<br>+0.031<br>-0.015 | H<br>+0.062<br>-0.062 |                 |
| <b>40 V<sub>DC</sub> AT +85 °C</b>  |                      |         |                          |                                      |         |         |                                  |                                    |        |         |                       |   |                       |                       |                 |
| 190                                 | 34                   | 27      | 2.5                      | 195                                  | 297     | 400     | 20                               | -55                                | +20    | +35     | 48                    | 427   | 1.125                 | 0.600                 | XTV197(1)040POA |
| 290                                 | 34                   | 27      | 2.5                      | 200                                  | 300     | 400     | 20                               | -55                                | +20    | +35     | 50                    | 427   | 1.125                 | 0.600                 | XTV297(1)040POA |
| 500                                 | 34                   | 27      | 1.5                      | 200                                  | 300     | 400     | 20                               | -75                                | +20    | +35     | 68                    | 694   | 1.125                 | 1.100                 | XTV507(1)040POA |
| 1000                                | 34                   | 27      | 1.5                      | 195                                  | 297     | 400     | 20                               | -75                                | +20    | +35     | 82                    | 694   | 1.125                 | 1.100                 | XTV108(1)040POA |
| <b>50 V<sub>DC</sub> AT +85 °C</b>  |                      |         |                          |                                      |         |         |                                  |                                    |        |         |                       |   |                       |                       |                 |
| 900                                 | 44                   | 32      | 1.5                      | 195                                  | 297     | 400     | 25                               | -85                                | +20    | +35     | 82                    | 694   | 1.125                 | 1.100                 | XTV907(1)050POA |
| <b>60 V<sub>DC</sub> AT +85 °C</b>  |                      |         |                          |                                      |         |         |                                  |                                    |        |         |                       |   |                       |                       |                 |
| 12                                  | 50                   | 40      | 10.0                     | 35                                   | 52      | 70      | 180                              | -30                                | +20    | +20     | 14                    | 137   | 0.656                 | 0.438                 | XTK126(1)060POA |
| 25                                  | 50                   | 40      | 5.0                      | 60                                   | 90      | 120     | 90                               | -30                                | +20    | +20     | 15                    | 213   | 0.656                 | 0.562                 | XTM256(1)060POA |
| 40                                  | 50                   | 40      | 2.7                      | 60                                   | 90      | 120     | 65                               | -35                                | +10    | +20     | 26                    | 333   | 0.875                 | 0.540                 | XTL406(1)060POA |
| 70                                  | 50                   | 40      | 2.7                      | 90                                   | 135     | 180     | 40                               | -35                                | +10    | +20     | 32                    | 375   | 0.875                 | 0.732                 | XTH706(1)060POA |
| 80                                  | 50                   | 40      | 2.7                      | 95                                   | 142     | 190     | 35                               | -35                                | +10    | +20     | 32                    | 375   | 0.875                 | 0.732                 | XTH806(1)060POA |
| 130                                 | 50                   | 40      | 2.5                      | 210                                  | 315     | 420     | 30                               | -50                                | +20    | +35     | 48                    | 427   | 1.125                 | 0.600                 | XTV137(1)060POA |
| 200                                 | 50                   | 40      | 1.5                      | 135                                  | 182     | 230     | 30                               | -50                                | +20    | +35     | 50                    | 550   | 1.125                 | 0.600                 | XTV207(1)060POA |
| 350                                 | 50                   | 40      | 1.5                      | 155                                  | 210     | 265     | 25                               | -70                                | +20    | +35     | 68                    | 694   | 1.125                 | 1.100                 | XTV357(1)060POA |
| 700                                 | 50                   | 40      | 1.5                      | 200                                  | 275     | 350     | 15                               | -70                                | +20    | +35     | 82                    | 694   | 1.125                 | 1.100                 | XTV707(1)060POA |
| 750                                 | 50                   | 40      | 1.5                      | 200                                  | 275     | 350     | 29                               | -70                                | +20    | +35     | 82                    | 694   | 1.125                 | 1.100                 | XTV757(1)060POA |
| <b>90 V<sub>DC</sub> AT +85 °C</b>  |                      |         |                          |                                      |         |         |                                  |                                    |        |         |                       |   |                       |                       |                 |
| 8.0                                 | 80                   | 60      | 10.0                     | 35                                   | 52      | 70      | 250                              | -30                                | +20    | +20     | 14                    | 137   | 0.656                 | 0.438                 | XTK805(1)090POA |
| 16                                  | 80                   | 60      | 5.0                      | 60                                   | 90      | 120     | 125                              | -30                                | +20    | +20     | 15                    | 213   | 0.656                 | 0.562                 | XTM166(1)090POA |
| 25                                  | 80                   | 60      | 2.7                      | 55                                   | 82      | 110     | 90                               | -35                                | +10    | +20     | 26                    | 333   | 0.875                 | 0.540                 | XTL256(1)090POA |
| 50                                  | 80                   | 60      | 2.7                      | 90                                   | 135     | 180     | 45                               | -35                                | +10    | +20     | 32                    | 375   | 0.875                 | 0.732                 | XTH506(1)090POA |
| 84                                  | 80                   | 60      | 2.5                      | 195                                  | 287     | 390     | 40                               | -40                                | +20    | +35     | 48                    | 427   | 1.125                 | 0.600                 | XTV846(1)090POA |
| 120                                 | 80                   | 60      | 1.5                      | 135                                  | 182     | 230     | 40                               | -40                                | +20    | +35     | 50                    | 550   | 1.125                 | 0.600                 | XTV127(1)090POA |
| 220                                 | 80                   | 60      | 1.5                      | 145                                  | 202     | 250     | 30                               | -60                                | +20    | +35     | 68                    | 694   | 1.125                 | 1.100                 | XTV227(1)090POA |
| 450                                 | 80                   | 60      | 1.5                      | 195                                  | 215     | 235     | 25                               | -60                                | +20    | +35     | 82                    | 694   | 1.125                 | 1.100                 | XTV457(1)090POA |
| <b>180 V<sub>DC</sub> AT +85 °C</b> |                      |         |                          |                                      |         |         |                                  |                                    |        |         |                       |   |                       |                       |                 |
| 2.0                                 | 160                  | 120     | 20.0                     | 75                                   | 112     | 150     | 850                              | -30                                | +20    | +20     | 21                    | 108   | 0.656                 | 0.719                 | XTK205(1)180POA |
| 4.0                                 | 160                  | 120     | 20.0                     | 35                                   | 52      | 70      | 500                              | -30                                | +20    | +20     | 21                    | 117   | 0.656                 | 0.719                 | XTK405(1)180POA |
| 8.0                                 | 160                  | 120     | 10.0                     | 60                                   | 90      | 120     | 250                              | -30                                | +20    | +20     | 23                    | 186   | 0.656                 | 0.938                 | XTM805(1)180POA |
| 12                                  | 160                  | 120     | 5.6                      | 55                                   | 82      | 110     | 180                              | -35                                | +10    | +20     | 44                    | 282   | 0.875                 | 0.920                 | XTL126(1)180POA |
| 25                                  | 160                  | 120     | 5.3                      | 90                                   | 135     | 180     | 90                               | -35                                | +10    | +20     | 56                    | 341   | 0.875                 | 1.300                 | XTH256(1)180POA |
| 42                                  | 160                  | 120     | 5.0                      | 120                                  | 162     | 205     | 75                               | -40                                | +20    | +35     | 74                    | 363   | 1.125                 | 0.976                 | XTV426(1)180POA |
| 60                                  | 160                  | 120     | 3.0                      | 135                                  | 182     | 230     | 60                               | -40                                | +20    | +35     | 78                    | 363   | 1.125                 | 0.976                 | XTV606(1)180POA |
| 110                                 | 160                  | 120     | 3.0                      | 145                                  | 202     | 250     | 60                               | -60                                | +20    | +35     | 114                   | 631   | 1.125                 | 1.938                 | XTV117(1)180POA |
| 230                                 | 160                  | 120     | 3.0                      | 200                                  | 275     | 350     | 50                               | -60                                | +20    | +35     | 142                   | 631   | 1.125                 | 1.938                 | XTV237(1)180POA |

**Note**

- Part number definitions:
  - (1) Tolerance code:
    - T = -15 % to +50 % (standard for XTK, XTM, XTV)
    - U = -15 % to +75 % (standard for XTH, XTL)
    - M =  $\pm$  20 % (available by special order)



| STANDARD RATINGS AND DIMENSIONS      |   |                          |   |          |          |                                  |                                    |         |          |                       |   |                         |                         |             |                 |
|--------------------------------------|---|--------------------------|---|----------|----------|----------------------------------|------------------------------------|---------|----------|-----------------------|---|-------------------------|-------------------------|-------------|-----------------|
| CAPACITANCE<br>( $\mu$ F)            | MAX. WORKING VOLTAGE<br>+ 125 °C + 175 °C | TYP. ESR<br>( $\Omega$ ) | MAX. DCL AT MAX. V <sub>DC</sub> ( $\mu$ A) |          |          | MAX. Z<br>-55 °C<br>( $\Omega$ ) | MAX. % CAP. CHANGE FROM ROOM TEMP. |         |          | APPROX. WEIGHT<br>(g) | MAX. RIPPLE<br>120 Hz<br>RMS<br>-55 °C<br>TO<br>+175 °C<br>(mA) | SIZE                    |                         | PART NUMBER |                 |
|                                      |   |                          | + 85 °C                                     | + 125 °C | + 175 °C |                                  | -55 °C                             | + 85 °C | + 175 °C |                       |   | D<br>+ 0.031<br>- 0.015 | H<br>+ 0.062<br>- 0.062 |             |                 |
| <b>270 V<sub>DC</sub> AT + 85 °C</b> |   |                          |   |          |          |                                  |                                    |         |          |                       |   |                         |                         |             |                 |
| 2.5                                  | 240                                       | 180                      | 30.0  | 35       | 52       | 70                               | 750                                | -30     | +20      | +20                   | 28  | 112                     | 0.656                   | 1.031       | XTK255(1)270POA |
| 5.0                                  | 240                                       | 180                      | 15.0  | 55       | 82       | 110                              | 375                                | -30     | +20      | +20                   | 31  | 179                     | 0.656                   | 1.375       | XTM505(1)270POA |
| 8.0                                  | 240                                       | 180                      | 8.3   | 55       | 82       | 110                              | 270                                | -35     | +10      | +20                   | 62  | 266                     | 0.875                   | 1.270       | XTL805(1)270POA |
| 16                                   | 240                                       | 180                      | 8.3   | 90       | 135      | 180                              | 135                                | -35     | +10      | +20                   | 81  | 320                     | 0.875                   | 1.865       | XTH166(1)270POA |
| 28                                   | 240                                       | 180                      | 7.5   | 120      | 162      | 205                              | 80                                 | -40     | +20      | +35                   | 100   | 339                     | 1.125                   | 1.350       | XTV286(1)270POA |
| 40                                   | 240                                       | 180                      | 7.5   | 135      | 182      | 230                              | 100                                | -40     | +20      | +35                   | 104   | 339                     | 1.125                   | 1.350       | XTV406(1)270POA |
| 75                                   | 240                                       | 180                      | 4.5   | 145      | 202      | 250                              | 90                                 | -60     | +20      | +35                   | 160   | 608                     | 1.125                   | 2.812       | XTV756(1)270POA |
| 150                                  | 240                                       | 180                      | 4.5   | 195      | 215      | 235                              | 75                                 | -60     | +20      | +35                   | 202   | 608                     | 1.125                   | 2.812       | XTV157(1)270POA |
| <b>360 V<sub>DC</sub> AT + 85 °C</b> |   |                          |   |          |          |                                  |                                    |         |          |                       |   |                         |                         |             |                 |
| 2.0                                  | 320                                       | 240                      | 40.0  | 35       | 52       | 70                               | 1000                               | -30     | +20      | +20                   | 37  | 108                     | 0.656                   | 1.312       | XTK205(1)360POA |
| 4.0                                  | 320                                       | 240                      | 20.0  | 60       | 90       | 120                              | 500                                | -30     | +20      | +20                   | 41  | 175                     | 0.656                   | 1.781       | XTM405(1)360POA |
| 6.0                                  | 320                                       | 240                      | 11.0  | 55       | 82       | 110                              | 360                                | -35     | +10      | +20                   | 80  | 258                     | 0.875                   | 1.635       | XTL605(1)360POA |
| 12                                   | 320                                       | 240                      | 11.0  | 90       | 135      | 180                              | 180                                | -35     | +10      | +20                   | 105   | 314                     | 0.875                   | 2.420       | XTH126(1)360POA |
| 22                                   | 320                                       | 240                      | 10.0  | 125      | 170      | 215                              | 100                                | -40     | +20      | +35                   | 126   | 323                     | 1.125                   | 1.705       | XTV226(1)360POA |
| 30                                   | 320                                       | 240                      | 10.0  | 135      | 182      | 230                              | 120                                | -40     | +20      | +35                   | 133   | 323                     | 1.125                   | 1.705       | XTV306(1)360POA |
| <b>450 V<sub>DC</sub> AT + 85 °C</b> |   |                          |   |          |          |                                  |                                    |         |          |                       |   |                         |                         |             |                 |
| 5.0                                  | 400                                       | 300                      | 13.0  | 55       | 82       | 110                              | 450                                | -35     | +10      | +20                   | 98  | 262                     | 0.875                   | 2.000       | XTL505(1)450POA |
| 10                                   | 400                                       | 300                      | 13.0  | 90       | 135      | 180                              | 225                                | -35     | +10      | +20                   | 130   | 318                     | 0.875                   | 2.980       | XTH106(1)450POA |
| 17                                   | 400                                       | 300                      | 12.5  | 125      | 170      | 215                              | 130                                | -40     | +20      | +35                   | 152   | 315                     | 1.125                   | 2.080       | XTV176(1)450POA |
| 25                                   | 400                                       | 300                      | 12.5  | 135      | 182      | 230                              | 150                                | -40     | +20      | +35                   | 164   | 315                     | 1.125                   | 2.080       | XTV256(1)450POA |
| <b>540 V<sub>DC</sub> AT + 85 °C</b> |   |                          |   |          |          |                                  |                                    |         |          |                       |   |                         |                         |             |                 |
| 4.0                                  | 480                                       | 360                      | 16.6  | 55       | 82       | 110                              | 540                                | -35     | +10      | +20                   | 114   | 250                     | 0.875                   | 2.365       | XTL405(1)540POA |
| 8.0                                  | 480                                       | 360                      | 16.6  | 90       | 135      | 180                              | 270                                | -35     | +10      | +20                   | 154   | 306                     | 0.875                   | 3.532       | XTH805(1)540POA |
| 14                                   | 480                                       | 300                      | 15.0  | 120      | 162      | 205                              | 160                                | -40     | +20      | +35                   | 178   | 309                     | 1.125                   | 2.435       | XTV146(1)540POA |
| 20                                   | 480                                       | 300                      | 15.0  | 135      | 182      | 230                              | 170                                | -40     | +20      | +35                   | 196   | 309                     | 1.125                   | 2.435       | XTV206(1)540POA |
| <b>630 V<sub>DC</sub> AT + 85 °C</b> |   |                          |   |          |          |                                  |                                    |         |          |                       |   |                         |                         |             |                 |
| 3.5                                  | 560                                       | 420                      | 18.9  | 55       | 82       | 110                              | 630                                | -35     | +10      | +20                   | 133   | 249                     | 0.875                   | 2.720       | XTL355(1)630POA |
| 7.0                                  | 560                                       | 420                      | 18.9  | 90       | 135      | 180                              | 315                                | -35     | +10      | +20                   | 179   | 308                     | 0.875                   | 4.062       | XTH705(1)630POA |
| 12                                   | 560                                       | 420                      | 17.5  | 120      | 162      | 205                              | 180                                | -40     | +20      | +35                   | 204   | 306                     | 1.125                   | 2.810       | XTV126T630POA   |
| 18                                   | 560                                       | 420                      | 17.5  | 135      | 182      | 230                              | 200                                | -40     | +20      | +35                   | 225   | 306                     | 1.125                   | 2.810       | XTV186(1)630POA |

**Note**

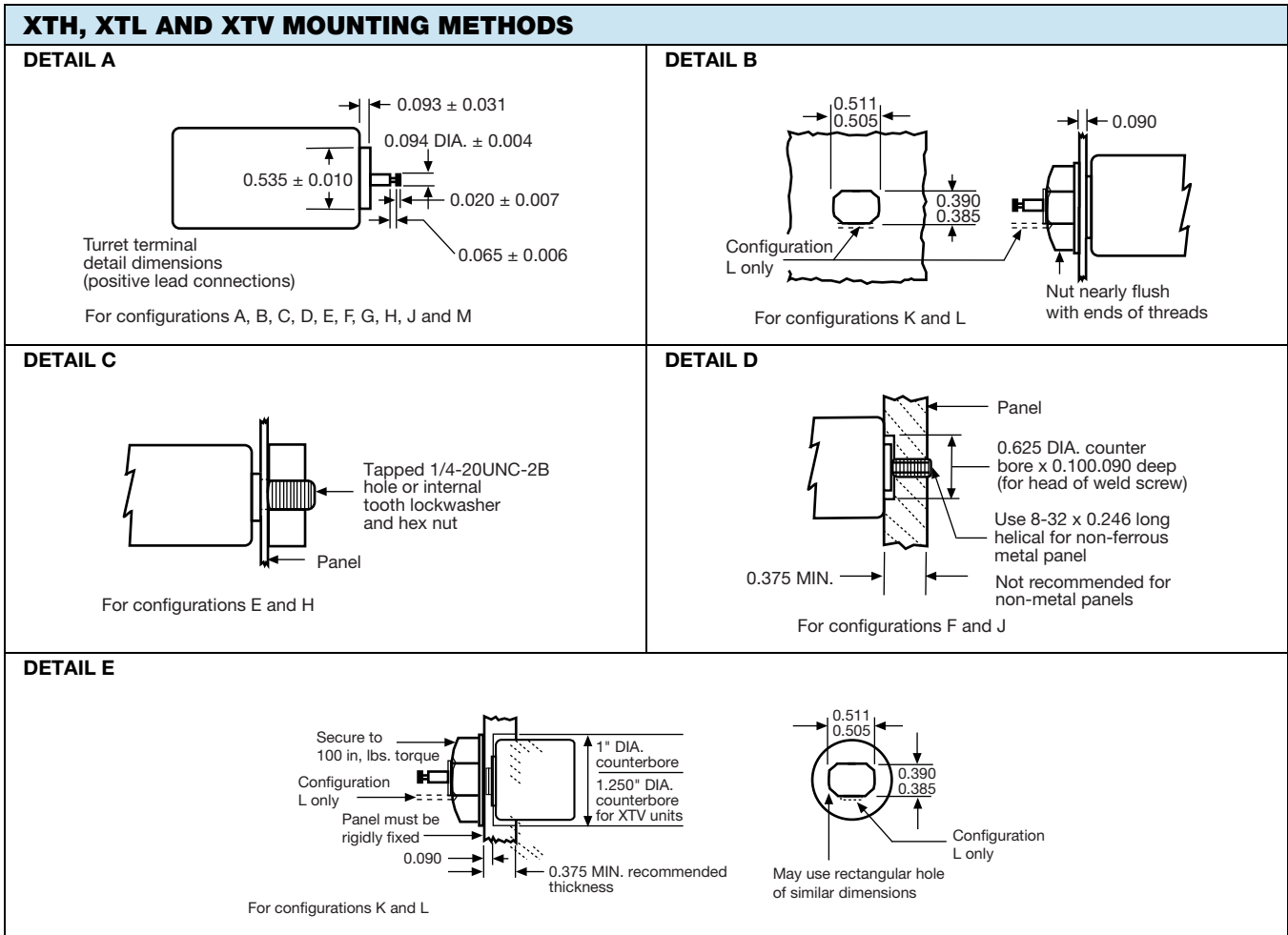
- Part number definitions:
  - (1) Tolerance code:
    - T = - 15 % to + 50 % (standard for XTK, XTM, XTV)
    - U = -15 % to + 75 % (standard for XTH, XTL)
    - M =  $\pm$  20 % (available by special order)

| XTH-L-V STYLES  |  |  |
|---|--|--|
| <p><b>STYLE A</b></p> <p>Top Bottom</p>   | <p><b>STYLE B</b></p> <p>Top Bottom</p>  | <p><b>STYLE C</b></p> <p>Top Bottom</p>  |
| <p><b>STYLE D</b></p> <p>Top Bottom</p> <p>Negative screw lug is for indexing and negative connection only</p>              | <p><b>STYLE E</b></p> <p>Top Bottom</p> <p>See Detail C in Mounting Methods table for suggested mounting methods</p>       | <p><b>STYLE F</b></p> <p>Top Bottom</p> <p>See Detail D in Mounting Methods table for suggested mounting method</p>  |
| <p><b>STYLE G</b></p> <p>Top Bottom</p> <p>Negative screw lug is for index and negative connection only</p>                 | <p><b>STYLE H</b></p> <p>Top Bottom</p> <p>See Detail C in Mounting Methods table for suggested mounting methods</p>       | <p><b>STYLE J</b></p> <p>Top Bottom</p> <p>See Detail D in Mounting Methods table for suggested mounting methods</p> |
| <p><b>STYLE K</b></p> <p>Top Bottom</p> <p>See Details B and E in Mounting Methods table for suggested mounting methods</p> | <p><b>STYLE L</b></p> <p>Top Bottom</p> <p>See Detail B and E in Mounting Methods table for suggested mounting methods</p> | <p><b>STYLE M</b></p> <p>Top Bottom</p> <p>* Extends 0.125 on 0.875 DIA. units only</p>                              |

| XTK-M STYLES                              |   |   |   |
|---|---|---|---|
| <p><b>STYLE A</b></p> <p>POS      NEG</p> | <p><b>STYLE B</b></p> <p>POS      NEG</p> | <p><b>STYLE C</b></p> <p>POS      NEG</p> | <p><b>STYLE D</b></p> <p>POS      NEG</p> |
| <p><b>STYLE E</b></p> <p>POS      NEG</p> | <p><b>STYLE F</b></p> <p>POS      NEG</p> | <p><b>STYLE G</b></p> <p>POS      NEG</p> | <p><b>STYLE H</b></p> <p>POS      NEG</p> |

| POSITIVE TERMINALS FOR XTK AND XTM |  |                                |                       |
|------------------------------------|--|--------------------------------|-----------------------|
| <p><b>STYLE A</b></p>              | <p><b>STYLE B, C AND D</b></p> <p>Terminal detail enlarged</p> | <p><b>STYLE E, G AND H</b></p> | <p><b>STYLE F</b></p> |

| NEGATIVE TERMINALS FOR XTK AND XTM |   |                             |                             |
|------------------------------------|---|-----------------------------|-----------------------------|
| <p><b>STYLE A</b></p>              | <p><b>STYLE B, E AND F</b></p> <p>Case negative</p> | <p><b>STYLE C AND G</b></p> | <p><b>STYLE D AND H</b></p> |



**Note**

- Standard mounting nut provided is plated steel. Stainless steel nut can be obtained by adding "/STN" suffix to part number.

| 04022 RATINGS AND CASE CODES  |                  |                    |                      |         |          |                           |                    |                        |         |          |                        |                                     |        |
|---|------------------|--------------------|----------------------|---------|----------|---------------------------|--------------------|------------------------|---------|----------|------------------------|-------------------------------------|--------|
| DSCC DRAWING 04022 PIN  | CAP. (NOM.) (μF) | CAP. TOLERANCE (%) | DC LEAKAGE MAX. (μA) |         |          | ESR MAX. 120 Hz 25 °C (Ω) | IMPEDANCE MAX. (Ω) | CAPACITANCE CHANGE (%) |         |          | RIPPLE CURRENT 1/ (mA) | DIMENSION L ± 0.062 (1.57) (INCHES) | FIGURE |
|   |                  |                    | + 25 °C              | + 85 °C | + 125 °C |                           |                    | - 55 °C                | + 85 °C | + 125 °C |                        |                                     |        |
| <b>8 V<sub>DC</sub> AT + 85 °C RATED; 9.2 V<sub>DC</sub> AT + 85 °C SURGE</b>   |                  |                    |                      |         |          |                           |                    |                        |         |          |                        |                                     |        |
| 01  | 70               | + 50, - 15         | 6                    | 30      | 48       | 12                        | 60                 | - 60                   | + 30    | + 30     | 137                    | 0.438 (11.13)                       | 1A     |
| 02  | 140              | + 50, - 15         | 10                   | 50      | 80       | 5.9                       | 30                 | - 60                   | + 30    | + 30     | 213                    | 0.562 (14.27)                       | 1A     |
| <b>10 V<sub>DC</sub> AT + 85 °C RATED; 11.5 V<sub>DC</sub> AT + 85 °C SURGE</b> |                  |                    |                      |         |          |                           |                    |                        |         |          |                        |                                     |        |
| 03  | 50               | + 50, - 15         | 5                    | 25      | 40       | 11.7                      | 75                 | - 60                   | + 30    | + 30     | 137                    | 0.438 (11.13)                       | 1A     |
| 04  | 100              | + 50, - 15         | 9                    | 45      | 72       | 5.9                       | 40                 | - 60                   | + 30    | + 30     | 213                    | 0.562 (14.27)                       | 1A     |
| <b>20 V<sub>DC</sub> AT + 85 °C RATED; 23 V<sub>DC</sub> AT + 85 °C SURGE</b>   |                  |                    |                      |         |          |                           |                    |                        |         |          |                        |                                     |        |
| 05  | 28               | + 50, - 15         | 6                    | 30      | 48       | 12                        | 85                 | - 40                   | + 20    | + 20     | 137                    | 0.438 (11.13)                       | 1A     |
| 06  | 56               | + 50, - 15         | 10                   | 50      | 80       | 6                         | 45                 | - 40                   | + 20    | + 20     | 213                    | 0.562 (14.27)                       | 1A     |
| <b>30 V<sub>DC</sub> AT + 85 °C RATED; 34.5 V<sub>DC</sub> AT + 85 °C SURGE</b> |                  |                    |                      |         |          |                           |                    |                        |         |          |                        |                                     |        |
| 07  | 20               | + 50, - 15         | 7                    | 35      | 56       | 11.7                      | 125                | - 40                   | + 20    | + 20     | 137                    | 0.438 (11.13)                       | 1A     |
| 08  | 40               | + 50, - 15         | 12                   | 60      | 96       | 5.9                       | 75                 | - 40                   | + 20    | + 20     | 213                    | 0.562 (14.27)                       | 1A     |



| 04022 RATINGS AND CASE CODES  |                        |                          |                         |         |          |                                    |                          |                              |         |          |                                 |  |        |
|---|------------------------|--------------------------|-------------------------|---------|----------|------------------------------------|--------------------------|------------------------------|---------|----------|---------------------------------|--|--------|
| DSCC<br>DRAWING<br>04022<br>PIN   | CAP.<br>(NOM.)<br>(µF) | CAP.<br>TOLERANCE<br>(%) | DC LEAKAGE MAX.<br>(µA) |         |          | ESR MAX.<br>120 Hz<br>25 °C<br>(Ω) | IMPEDANCE<br>MAX.<br>(Ω) | CAPACITANCE<br>CHANGE<br>(%) |         |          | RIPPLE<br>CURRENT<br>1/<br>(mA) | DIMENSION<br>L<br>± 0.062 (1.57)<br>(INCHES) | FIGURE |
|   |                        |                          | + 25 °C                 | + 85 °C | + 125 °C |                                    |                          | - 55 °C                      | + 85 °C | + 125 °C |                                 |  |        |
| <b>60 V<sub>DC</sub> AT + 85 °C RATED; 69 V<sub>DC</sub> AT + 85 °C SURGE</b>   |                        |                          |                         |         |          |                                    |                          |                              |         |          |                                 |  |        |
| 09  | 12                     | + 50, - 15               | 7                       | 35      | 56       | 12                                 | 180                      | - 30                         | + 20    | + 20     | 137                             | 0.438 (11.13)                                | 1A     |
| 10  | 25                     | + 50, - 15               | 12                      | 60      | 96       | 6                                  | 90                       | - 30                         | + 20    | + 20     | 213                             | 0.562 (14.27)                                | 1A     |
| <b>90 V<sub>DC</sub> AT + 85 °C RATED; 103 V<sub>DC</sub> AT + 85 °C SURGE</b>  |                        |                          |                         |         |          |                                    |                          |                              |         |          |                                 |  |        |
| 11  | 8.0                    | + 50, - 15               | 7                       | 35      | 56       | 12                                 | 250                      | - 30                         | + 20    | + 20     | 137                             | 0.438 (11.13)                                | 1A     |
| 12  | 16                     | + 50, - 15               | 12                      | 60      | 96       | 5.9                                | 125                      | - 30                         | + 20    | + 20     | 213                             | 0.562 (14.27)                                | 1A     |
| <b>180 V<sub>DC</sub> AT + 85 °C RATED; 207 V<sub>DC</sub> AT + 85 °C SURGE</b> |                        |                          |                         |         |          |                                    |                          |                              |         |          |                                 |  |        |
| 13  | 4.0                    | + 50, - 15               | 7                       | 35      | 56       | 24                                 | 500                      | - 30                         | + 20    | + 20     | 117                             | 0.719 (18.26)                                | 1A     |
| 14  | 8.0                    | + 50, - 15               | 12                      | 60      | 96       | 12                                 | 250                      | - 30                         | + 20    | + 20     | 186                             | 0.938 (23.83)                                | 1A     |
| <b>270 V<sub>DC</sub> AT + 85 °C RATED; 310 V<sub>DC</sub> AT + 85 °C SURGE</b> |                        |                          |                         |         |          |                                    |                          |                              |         |          |                                 |  |        |
| 15  | 2.5                    | + 50, - 15               | 7                       | 35      | 56       | 36                                 | 750                      | - 30                         | + 20    | + 20     | 112                             | 1.031 (26.19)                                | 1A     |
| 16  | 5.0                    | + 50, - 15               | 11                      | 55      | 88       | 18                                 | 375                      | - 30                         | + 20    | + 20     | 179                             | 1.375 (34.93)                                | 1A     |
| <b>360 V<sub>DC</sub> AT + 85 °C RATED; 414 V<sub>DC</sub> AT + 85 °C SURGE</b> |                        |                          |                         |         |          |                                    |                          |                              |         |          |                                 |  |        |
| 17  | 2.0                    | + 50, - 15               | 7                       | 35      | 56       | 48                                 | 1000                     | - 30                         | + 20    | + 20     | 108                             | 1.312 (33.32)                                | 1A     |
| 18  | 4.0                    | + 50, - 15               | 12                      | 60      | 96       | 24                                 | 500                      | - 30                         | + 20    | + 20     | 175                             | 1.781 (45.24)                                | 1A     |
| <b>20 V<sub>DC</sub> AT + 85 °C RATED; 23 V<sub>DC</sub> AT + 85 °C SURGE</b>   |                        |                          |                         |         |          |                                    |                          |                              |         |          |                                 |  |        |
| 19  | 100                    | + 50, - 15               | 10                      | 50      | 80       | 3.3                                | 30                       | - 60                         | + 15    | + 20     | 333                             | 0.540 (13.72)                                | 1B     |
| 20  | 200                    | + 75, - 15               | 16                      | 80      | 128      | 2.8                                | 20                       | - 60                         | + 15    | + 20     | 375                             | 0.732 (18.59)                                | 1B     |
| <b>30 V<sub>DC</sub> AT + 85 °C RATED; 34.5 V<sub>DC</sub> AT + 85 °C SURGE</b> |                        |                          |                         |         |          |                                    |                          |                              |         |          |                                 |  |        |
| 21  | 75                     | + 75, - 15               | 11                      | 55      | 88       | 3.1                                | 45                       | - 45                         | + 10    | + 10     | 333                             | 0.540 (13.72)                                | 1B     |
| 22  | 150                    | + 75, - 15               | 13                      | 90      | 104      | 3                                  | 30                       | - 45                         | + 10    | + 10     | 375                             | 0.732 (18.59)                                | 1B     |
| <b>60 V<sub>DC</sub> AT + 85 °C RATED; 69 V<sub>DC</sub> AT + 85 °C SURGE</b>   |                        |                          |                         |         |          |                                    |                          |                              |         |          |                                 |  |        |
| 23  | 40                     | + 75, - 15               | 12                      | 60      | 96       | 3.2                                | 65                       | - 35                         | + 10    | + 10     | 333                             | 0.540 (13.72)                                | 1B     |
| 24  | 80                     | + 75, - 15               | 19                      | 95      | 152      | 3.1                                | 35                       | - 35                         | + 10    | + 10     | 375                             | 0.732 (18.59)                                | 1B     |
| <b>90 V<sub>DC</sub> AT + 85 °C RATED; 103 V<sub>DC</sub> AT + 85 °C SURGE</b>  |                        |                          |                         |         |          |                                    |                          |                              |         |          |                                 |  |        |
| 25  | 25                     | + 75, - 15               | 11                      | 55      | 88       | 3.2                                | 90                       | - 35                         | + 10    | + 10     | 333                             | 0.540 (13.72)                                | 1B     |
| 26  | 50                     | + 75, - 15               | 18                      | 90      | 144      | 3.1                                | 45                       | - 35                         | + 10    | + 10     | 375                             | 0.732 (18.59)                                | 1B     |
| <b>180 V<sub>DC</sub> AT + 85 °C RATED; 207 V<sub>DC</sub> AT + 85 °C SURGE</b> |                        |                          |                         |         |          |                                    |                          |                              |         |          |                                 |  |        |
| 27  | 12                     | + 75, - 15               | 11                      | 55      | 88       | 6.6                                | 180                      | - 35                         | + 10    | + 10     | 282                             | 0.920 (23.37)                                | 1B     |
| 28  | 25                     | + 75, - 15               | 18                      | 90      | 144      | 6.2                                | 90                       | - 35                         | + 10    | + 10     | 341                             | 1.300 (33.02)                                | 1B     |
| <b>270 V<sub>DC</sub> AT + 85 °C RATED; 310 V<sub>DC</sub> AT + 85 °C SURGE</b> |                        |                          |                         |         |          |                                    |                          |                              |         |          |                                 |  |        |
| 29  | 8.0                    | + 75, - 15               | 11                      | 55      | 88       | 9.9                                | 270                      | - 35                         | + 10    | + 10     | 266                             | 1.270 (32.36)                                | 1B     |
| 30  | 16                     | + 75, - 15               | 18                      | 90      | 144      | 9.8                                | 135                      | - 35                         | + 10    | + 10     | 320                             | 1.865 (47.37)                                | 1B     |
| <b>360 V<sub>DC</sub> AT + 85 °C RATED; 414 V<sub>DC</sub> AT + 85 °C SURGE</b> |                        |                          |                         |         |          |                                    |                          |                              |         |          |                                 |  |        |
| 31  | 6.0                    | + 75, - 15               | 11                      | 55      | 88       | 13                                 | 360                      | - 35                         | + 10    | + 10     | 258                             | 1.635 (41.53)                                | 1B     |
| 32  | 12                     | + 75, - 15               | 18                      | 90      | 144      | 13                                 | 180                      | - 35                         | + 10    | + 10     | 314                             | 2.420 (61.47)                                | 1B     |
| <b>450 V<sub>DC</sub> AT + 85 °C RATED; 518 V<sub>DC</sub> AT + 85 °C SURGE</b> |                        |                          |                         |         |          |                                    |                          |                              |         |          |                                 |  |        |
| 33  | 5.0                    | + 75, - 15               | 11                      | 55      | 88       | 15                                 | 450                      | - 35                         | + 10    | + 10     | 252                             | 2.000 (50.80)                                | 1B     |
| 34  | 10                     | + 75, - 15               | 18                      | 90      | 144      | 15                                 | 225                      | - 35                         | + 10    | + 10     | 308                             | 2.980 (75.69)                                | 1B     |
| <b>540 V<sub>DC</sub> AT + 85 °C RATED; 621 V<sub>DC</sub> AT + 85 °C SURGE</b> |                        |                          |                         |         |          |                                    |                          |                              |         |          |                                 |  |        |
| 35  | 4.0                    | + 75, - 15               | 11                      | 55      | 88       | 20                                 | 540                      | - 35                         | + 10    | + 10     | 250                             | 2.365 (60.07)                                | 1B     |
| 36  | 8.0                    | + 75, - 15               | 18                      | 90      | 144      | 20                                 | 270                      | - 35                         | + 10    | + 10     | 308                             | 3.532 (89.71)                                | 1B     |
| <b>630 V<sub>DC</sub> AT + 85 °C RATED; 724 V<sub>DC</sub> AT + 85 °C SURGE</b> |                        |                          |                         |         |          |                                    |                          |                              |         |          |                                 |  |        |
| 37  | 3.5                    | + 75, - 15               | 11                      | 55      | 88       | 22                                 | 630                      | - 35                         | + 10    | + 10     | 250                             | 2.720 (69.09)                                | 1B     |

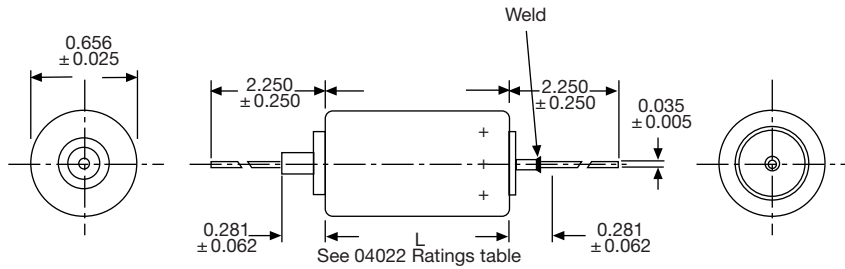




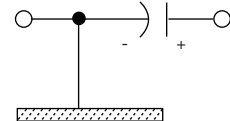
| 04022 RATINGS AND CASE CODES  |                  |                    |                      |         |          |                           |                    |                        |         |          |                        |                                     |        |
|---|------------------|--------------------|----------------------|---------|----------|---------------------------|--------------------|------------------------|---------|----------|------------------------|-------------------------------------|--------|
| DSCC DRAWING 04022 PIN  | CAP. (NOM.) (µF) | CAP. TOLERANCE (%) | DC LEAKAGE MAX. (µA) |         |          | ESR MAX. 120 Hz 25 °C (Ω) | IMPEDANCE MAX. (Ω) | CAPACITANCE CHANGE (%) |         |          | RIPPLE CURRENT 1/ (mA) | DIMENSION L ± 0.062 (1.57) (INCHES) | FIGURE |
|   |                  |                    | + 25 °C              | + 85 °C | + 125 °C |                           |                    | - 55 °C                | + 85 °C | + 125 °C |                        |                                     |        |
| <b>30 V<sub>DC</sub> AT + 85 °C RATED; 34.5 V<sub>DC</sub> AT + 85 °C SURGE</b> |                  |                    |                      |         |          |                           |                    |                        |         |          |                        |                                     |        |
| 39  | 370              | ± 20               | 18                   | 125     | 180      | 1.7                       | 15                 | - 65                   | + 20    | + 25     | 550                    | 0.600 (15.24)                       | 1C     |
| 40  | 370              | + 50, - 15         | 18                   | 125     | 180      | 1.7                       | 15                 | - 65                   | + 20    | + 25     | 550                    | 0.600 (15.24)                       | 1C     |
| 41  | 650              | ± 20               | 21                   | 145     | 210      | 1.8                       | 15                 | - 85                   | + 20    | + 25     | 694                    | 1.100 (27.94)                       | 1C     |
| 42  | 650              | + 50, - 15         | 21                   | 145     | 210      | 1.8                       | 15                 | - 85                   | + 20    | + 25     | 694                    | 1.100 (27.94)                       | 1C     |
| 43  | 1300             | ± 20               | 27                   | 190     | 270      | 1.8                       | 10                 | - 85                   | + 20    | + 25     | 694                    | 1.100 (27.94)                       | 1C     |
| 44  | 1300             | + 50, - 15         | 27                   | 190     | 270      | 1.8                       | 10                 | - 85                   | + 20    | + 25     | 694                    | 1.100 (27.94)                       | 1C     |
| <b>60 V<sub>DC</sub> AT + 85 °C RATED; 69 V<sub>DC</sub> AT + 85 °C SURGE</b>   |                  |                    |                      |         |          |                           |                    |                        |         |          |                        |                                     |        |
| 45  | 200              | ± 20               | 19                   | 135     | 190      | 1.8                       | 30                 | - 50                   | + 20    | + 25     | 550                    | 0.600 (15.24)                       | 1C     |
| 46  | 200              | + 50, - 15         | 19                   | 135     | 190      | 1.8                       | 30                 | - 50                   | + 20    | + 25     | 550                    | 0.600 (15.24)                       | 1C     |
| 47  | 350              | ± 20               | 22                   | 155     | 220      | 1.8                       | 25                 | - 70                   | + 20    | + 25     | 694                    | 1.100 (27.94)                       | 1C     |
| 48  | 350              | + 50, - 15         | 22                   | 155     | 220      | 1.8                       | 25                 | - 70                   | + 20    | + 25     | 694                    | 1.100 (27.94)                       | 1C     |
| 49  | 700              | ± 20               | 29                   | 200     | 290      | 1.8                       | 15                 | - 70                   | + 20    | + 25     | 694                    | 1.100 (27.94)                       | 1C     |
| 50  | 700              | + 50, - 15         | 29                   | 200     | 290      | 1.8                       | 15                 | - 70                   | + 20    | + 25     | 694                    | 1.100 (27.94)                       | 1C     |
| <b>90 V<sub>DC</sub> AT + 85 °C RATED; 103 V<sub>DC</sub> AT + 85 °C SURGE</b>  |                  |                    |                      |         |          |                           |                    |                        |         |          |                        |                                     |        |
| 51  | 120              | ± 20               | 19                   | 135     | 190      | 1.7                       | 40                 | - 40                   | + 20    | + 25     | 550                    | 0.600 (15.24)                       | 1C     |
| 52  | 120              | + 50, - 15         | 19                   | 135     | 190      | 1.7                       | 40                 | - 40                   | + 20    | + 25     | 550                    | 0.600 (15.24)                       | 1C     |
| 53  | 220              | ± 20               | 21                   | 145     | 210      | 1.8                       | 30                 | - 60                   | + 20    | + 25     | 694                    | 1.100 (27.94)                       | 1C     |
| 54  | 220              | + 50, - 15         | 21                   | 145     | 210      | 1.8                       | 30                 | - 60                   | + 20    | + 25     | 694                    | 1.100 (27.94)                       | 1C     |
| 55  | 450              | ± 20               | 29                   | 195     | 290      | 1.7                       | 35                 | - 60                   | + 20    | + 25     | 694                    | 1.100 (27.94)                       | 1C     |
| 56  | 450              | + 50, - 15         | 29                   | 195     | 290      | 1.7                       | 35                 | - 60                   | + 20    | + 25     | 694                    | 1.100 (27.94)                       | 1C     |
| <b>180 V<sub>DC</sub> AT + 85 °C RATED; 207 V<sub>DC</sub> AT + 85 °C SURGE</b> |                  |                    |                      |         |          |                           |                    |                        |         |          |                        |                                     |        |
| 57  | 42               | ± 20               | 17                   | 120     | 170      | 6                         | 75                 | - 40                   | + 20    | + 25     | 363                    | 0.976 (24.79)                       | 1C     |
| 58  | 42               | + 50, - 15         | 17                   | 120     | 170      | 6                         | 75                 | - 40                   | + 20    | + 25     | 363                    | 0.976 (24.79)                       | 1C     |
| 59  | 60               | ± 20               | 19                   | 135     | 190      | 3.4                       | 60                 | - 40                   | + 20    | + 25     | 363                    | 0.976 (24.79)                       | 1C     |
| 60  | 60               | + 50, - 15         | 19                   | 135     | 190      | 3.4                       | 60                 | - 40                   | + 20    | + 25     | 363                    | 0.976 (24.79)                       | 1C     |
| 61  | 110              | ± 20               | 21                   | 145     | 210      | 3.5                       | 60                 | - 60                   | + 20    | + 25     | 631                    | 1.938 (49.23)                       | 1C     |
| 62  | 110              | + 50, - 15         | 21                   | 145     | 210      | 3.5                       | 60                 | - 60                   | + 20    | + 25     | 631                    | 1.938 (49.23)                       | 1C     |
| 63  | 230              | ± 20               | 29                   | 200     | 290      | 3.5                       | 50                 | - 60                   | + 20    | + 25     | 631                    | 1.938 (49.23)                       | 1C     |
| 64  | 230              | + 50, - 15         | 29                   | 200     | 290      | 3.5                       | 50                 | - 60                   | + 20    | + 25     | 631                    | 1.938 (49.23)                       | 1C     |
| <b>270 V<sub>DC</sub> AT + 85 °C RATED; 310 V<sub>DC</sub> AT + 85 °C SURGE</b> |                  |                    |                      |         |          |                           |                    |                        |         |          |                        |                                     |        |
| 65  | 28               | ± 20               | 19                   | 120     | 190      | 9                         | 80                 | - 40                   | + 20    | + 25     | 339                    | 1.350 (34.29)                       | 1C     |
| 66  | 28               | + 50, - 15         | 19                   | 120     | 190      | 9                         | 80                 | - 40                   | + 20    | + 25     | 339                    | 1.350 (34.29)                       | 1C     |
| 67  | 40               | ± 20               | 19                   | 135     | 190      | 8.8                       | 100                | - 40                   | + 20    | + 25     | 339                    | 1.350 (34.29)                       | 1C     |
| 68  | 40               | + 50, - 15         | 19                   | 135     | 190      | 8.8                       | 100                | - 40                   | + 20    | + 25     | 339                    | 1.350 (34.29)                       | 1C     |
| 69  | 75               | ± 20               | 21                   | 145     | 210      | 5.2                       | 90                 | - 60                   | + 20    | + 25     | 608                    | 2.812 (71.42)                       | 1C     |
| 70  | 75               | + 50, - 15         | 21                   | 145     | 210      | 5.2                       | 90                 | - 60                   | + 20    | + 25     | 608                    | 2.812 (71.42)                       | 1C     |
| 71  | 150              | ± 20               | 28                   | 195     | 280      | 5.4                       | 75                 | - 60                   | + 20    | + 25     | 608                    | 2.812 (71.42)                       | 1C     |
| 72  | 150              | + 50, - 15         | 28                   | 195     | 280      | 5.4                       | 75                 | - 60                   | + 20    | + 25     | 608                    | 2.812 (71.42)                       | 1C     |
| <b>360 V<sub>DC</sub> AT + 85 °C RATED; 414 V<sub>DC</sub> AT + 85 °C SURGE</b> |                  |                    |                      |         |          |                           |                    |                        |         |          |                        |                                     |        |
| 73  | 22               | ± 20               | 18                   | 125     | 180      | 11.4                      | 100                | - 40                   | + 20    | + 25     | 323                    | 1.705 (43.31)                       | 1C     |
| 74  | 22               | + 50, - 15         | 18                   | 125     | 180      | 11.6                      | 100                | - 40                   | + 20    | + 25     | 323                    | 1.705 (43.31)                       | 1C     |
| 75  | 30               | ± 20               | 19                   | 135     | 190      | 11.7                      | 120                | - 40                   | + 20    | + 25     | 323                    | 1.705 (43.31)                       | 1C     |
| 76  | 30               | + 50, - 15         | 19                   | 135     | 190      | 11.7                      | 120                | - 40                   | + 20    | + 25     | 323                    | 1.705 (43.31)                       | 1C     |
| <b>450 V<sub>DC</sub> AT + 85 °C RATED; 518 V<sub>DC</sub> AT + 85 °C SURGE</b> |                  |                    |                      |         |          |                           |                    |                        |         |          |                        |                                     |        |
| 77  | 17               | ± 20               | 18                   | 125     | 180      | 15                        | 130                | - 40                   | + 20    | + 25     | 315                    | 2.080 (52.83)                       | 1C     |
| 78  | 17               | + 50, - 15         | 18                   | 125     | 180      | 15                        | 130                | - 40                   | + 20    | + 25     | 315                    | 2.080 (52.83)                       | 1C     |
| 79  | 25               | ± 20               | 19                   | 135     | 190      | 15                        | 150                | - 40                   | + 20    | + 25     | 315                    | 2.080 (52.83)                       | 1C     |
| 80  | 25               | + 50, - 15         | 19                   | 135     | 190      | 15                        | 150                | - 40                   | + 20    | + 25     | 315                    | 2.080 (52.83)                       | 1C     |
| <b>540 V<sub>DC</sub> AT + 85 °C RATED; 621 V<sub>DC</sub> AT + 85 °C SURGE</b> |                  |                    |                      |         |          |                           |                    |                        |         |          |                        |                                     |        |
| 81  | 14               | ± 20               | 17                   | 120     | 170      | 18                        | 160                | - 40                   | + 20    | + 25     | 309                    | 2.435 (61.85)                       | 1C     |
| 82  | 14               | + 50, - 15         | 17                   | 120     | 170      | 18                        | 160                | - 40                   | + 20    | + 25     | 309                    | 2.435 (61.85)                       | 1C     |
| 83  | 20               | ± 20               | 19                   | 135     | 190      | 18                        | 170                | - 40                   | + 20    | + 25     | 309                    | 2.435 (61.85)                       | 1C     |
| 84  | 20               | + 50, - 15         | 19                   | 135     | 190      | 18                        | 170                | - 40                   | + 20    | + 25     | 309                    | 2.435 (61.85)                       | 1C     |
| <b>630 V<sub>DC</sub> AT + 85 °C RATED; 724 V<sub>DC</sub> AT + 85 °C SURGE</b> |                  |                    |                      |         |          |                           |                    |                        |         |          |                        |                                     |        |
| 85  | 12               | ± 20               | 17                   | 120     | 170      | 16                        | 180                | - 40                   | + 20    | + 25     | 306                    | 2.810 (71.37)                       | 1C     |
| 86  | 12               | + 50, - 15         | 17                   | 120     | 170      | 16                        | 180                | - 40                   | + 20    | + 25     | 306                    | 2.810 (71.37)                       | 1C     |
| 87  | 18               | ± 20               | 19                   | 135     | 190      | 16                        | 200                | - 40                   | + 20    | + 25     | 306                    | 2.810 (71.37)                       | 1C     |
| 88  | 18               | + 50, - 15         | 19                   | 135     | 190      | 16                        | 200                | - 40                   | + 20    | + 25     | 306                    | 2.810 (71.37)                       | 1C     |

**FIGURES**

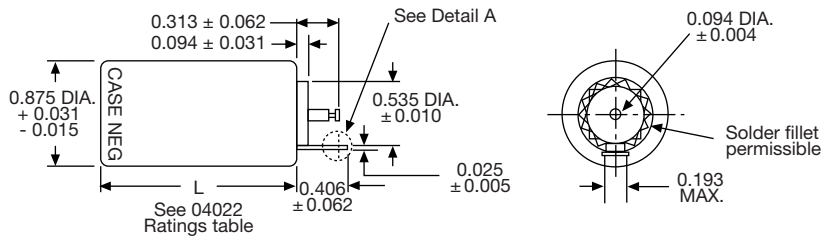
**FIGURE 1A**



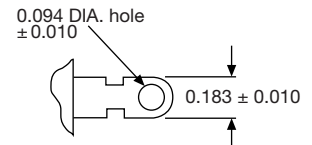
**CASE CIRCUIT DIAGRAM**



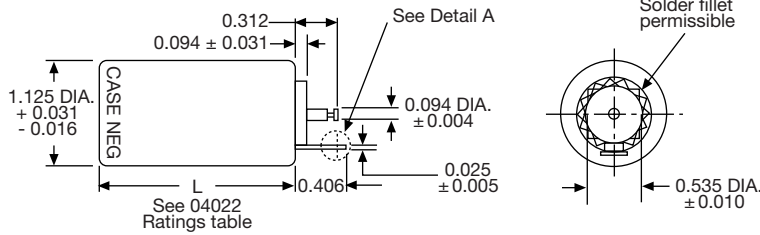
**FIGURE 1B**



**DETAIL A  
SOLDER LUG  
TERMINAL**



**FIGURE 1C**





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