

# CVS

## Surface Mount Aluminum Polymer Electrolytic Capacitors



### Features

- Low ESR
- High current
- High frequency
- High temperature
- Lead free
- RoHS Compliant

|   |  |                                  |     |     |      |      |    |      |  |
|---|--|----------------------------------|-----|-----|------|------|----|------|--|
| Operating Temperature Range                               |  | -55°C to +105°C                  |     |     |      |      |    |      |  |
| Capacitance Tolerance                                     |  | ±20% at 120 Hz, 20°C             |     |     |      |      |    |      |  |
| Surge voltage   | WVDC   | 2.5                              | 4   | 6.3 | 10   | 16   | 20 | 25   |  |
|   | SVDC   | 3.3                              | 5.2 | 8.2 | 11.5 | 18.4 | 23 | 28.7 |  |
| Dissipation Factor<br>(120 Hz, 20°C)                      | WVDC   | 2.5                              | 4   | 6.3 | 10   | 16   | 20 | 25   |  |
|   | tan δ  | 10% Maximum                      |     |     |      |      |    |      |  |
| ESR<br>(100kHz,20°C)                                      |  | See Part Listing                 |     |     |      |      |    |      |  |
| Leakage current<br>(2 Minutes,20°C)                       |  | See Part Listing                 |     |     |      |      |    |      |  |
| Low temperature stability<br>Impedance ratio<br>(100 kHz) | Rated WVDC   | 2.5                              | 4   | 6.3 | 10   | 16   | 20 | 25   |  |
|   | +105°C/+20°C   | ≤ 1.25                           |     |     |      |      |    |      |  |
|   | -55°C/ +20°C   | ≤ 1.25                           |     |     |      |      |    |      |  |
| Load Life   | 2000 Hours at rated voltage and +105°C                   |                                  |     |     |      |      |    |      |  |
|   | Capacitance change                                       | ≤20% of initial measured value   |     |     |      |      |    |      |  |
|   | Dissipation factor/ESR                                   | ≤150% of maximum specified value |     |     |      |      |    |      |  |
|   | Leakage current  | ≤100% of maximum specified value |     |     |      |      |    |      |  |
| Damp heat   | 1000 hours at 60°C, 90 to 95% RH with no voltage applied |                                  |     |     |      |      |    |      |  |
|   | Capacitance change                                       | ≤20% initial measured value      |     |     |      |      |    |      |  |
|   | Dissipation factor/ESR                                   | ≤150% of maximum specified value |     |     |      |      |    |      |  |
|   | Leakage current  | ≤100% of maximum specified value |     |     |      |      |    |      |  |
| Resistance to soldering heat                              | Vapor phase system (230°C±5°C for 75 seconds)            |                                  |     |     |      |      |    |      |  |
|   | Capacitance change                                       | ≤10% of initial measured value   |     |     |      |      |    |      |  |
|   | Dissipation factor/ESR                                   | ≤130% of maximum specified value |     |     |      |      |    |      |  |
|   | Leakage current  | ≤100% of maximum specified value |     |     |      |      |    |      |  |

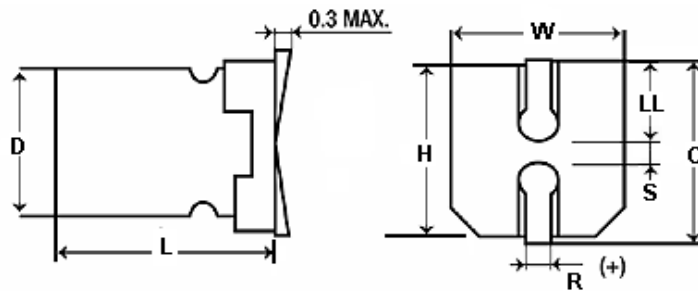


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## Physical Dimensions

| WVDC<br>(SV)<br>uF | 2.5<br>(3.3) | 4<br>(5.2) | 6.3<br>(8.2)     | 10<br>(11.5) | 16<br>(18.4) | 20<br>(23) | 25<br>(28.7) |
|--------------------|--------------|------------|------------------|--------------|--------------|------------|--------------|
| 6.8                | -----        | -----      | -----            | -----        | -----        | ----->     | 6.3x5.9      |
| 10                 | -----        | -----      | -----            | -----        | -----        | ----->     | 8X6.9        |
| 22                 | -----        | -----      | -----            | -----        | ----->       | 6.3x5.9    |              |
| 27                 | -----        | -----      | -----            | ----->       | 6.3X5.9      | 6.3x5.9    | 6.3x5.9      |
| 33                 | -----        | -----      | -----            | -----        | ----->       | 8X6.9      | 8X11.9       |
| 39                 | -----        | -----      | -----            | ----->       | 6.3X5.9      |            |              |
| 47                 | -----        | -----      | ----->           | 6.3x5.9      | 6.3X5.9      | 8X6.9      |              |
| 56                 | -----        | -----      | ----->           | 6.3X5.9      | 8X6.9        | ----->     | 10X12.6      |
| 82                 | -----        | ----->     | 6.3X5.9          | ----->       | 8X6.9        |            |              |
| 100                | ----->       | 6.3X5.9    | 6.3X5.9          | ----->       | 8X6.9        | 8X11.9     | 8X11.9       |
| 120                | -----        | ----->     | 6.3x5.9<br>8X6.9 | 8X6.9        |              |            |              |
| 150                | ----->       | 6.3X5.9    | 8X6.9            | 8X6.9        | ----->       | 10X12.6    | 10X12.6      |
| 180                | -----        | -----      | -----            | ----->       | 8X11.9       | ----->     | 10X12.6      |
| 220                | 6.3X5.9      | ----->     | 8x6.9            | -----        | -----        | ----->     | 10X12.6      |
| 270                | -----        | -----      | -----            | -----        | ----->       | 10X12.6    |              |
| 330                | ----->       | 8X6.9      | ----->           | 8X11.9       | 10X12.6      |            |              |
| 470                | 8X6.9        | ----->     | 8X11.9           | ----->       | 10X12.6      |            |              |
| 560                | ----->       | 8X11.9     | ----->           | 10X12.6      |              |            |              |
| 680                | 8X11.9       |            |                  |              |              |            |              |
| 820                | -----        | ----->     | 10X12.6          |              |              |            |              |
| 1000               | -----        | ----->     | 10X12.6          |              |              |            |              |
| 1200               | ----->       | 10X12.6    |                  |              |              |            |              |
| 1500               | 10X12.6      |            |                  |              |              |            |              |



| D+0.5 | L+1/-4 | W+0.2 | H+0.2 | C+0.2 | S+0.2 | R        |
|-------|--------|-------|-------|-------|-------|----------|
| 6.3   | 5.9    | 6.6   | 6.6   | 7.3   | 2.1   | .7+0.1   |
| 8     | 6.9    | 8.3   | 8.3   | 9     | 3.2   | .7+0.1   |
| 8     | 11.9   | 8.3   | 8.3   | 9     | 3.2   | .95+0.15 |
| 10    | 12.6   | 10.3  | 10.3  | 11    | 4.6   | .95+0.15 |



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## Standard Part Listing

| Cap (uF) | WVDC | IC PART #    | Maximum ESR $\Omega$ 100kHz 20°C | Leakage Current (uA) 2 minutes 20°C | Maximum RMS ripple current (mA) 100 kHz, 105°C | Dimensions DxL (mm) |
|----------|------|--------------|----------------------------------|-------------------------------------|--|---------------------|
| 6.8      | 25   | 685CVS025MEG | 80                               | 85                                  | 1200   | 6.3X5.9             |
| 10       | 25   | 106CVS025MFG | 60                               | 125                                 | 1500   | 8x6.9               |
| 22       | 20   | 276CVS020MEG | 60                               | 88                                  | 1450   | 6.3X5.9             |
| 27       | 16   | 276CVS016MEG | 50                               | 86                                  | 1620   | 6.3X5.9             |
| 27       | 20   | 276CVS020MEG | 60                               | 108                                 | 1450   | 6.3X5.9             |
| 27       | 25   | 276CVS025MEG | 40                               | 135                                 | 1500   | 6.3X5.9             |
| 33       | 20   | 336CVS020MFG | 45                               | 132                                 | 1890   | 8x6.9               |
| 33       | 25   | 336CVS025MFM | 30                               | 413                                 | 2980   | 8x11.9              |
| 39       | 16   | 396CVS016MEG | 50                               | 125                                 | 1620   | 6.3X5.9             |
| 47       | 10   | 476CVS010MEG | 50                               | 94                                  | 1620   | 6.3X5.9             |
| 47       | 16   | 476CVS016MEG | 50                               | 150                                 | 1620   | 6.3X5.9             |
| 47       | 20   | 476CVS020MFG | 45                               | 188                                 | 1890   | 8x6.9               |
| 56       | 10   | 566CVS010MEG | 45                               | 112                                 | 1700   | 6.3X5.9             |
| 56       | 16   | 566CVS016MFG | 45                               | 179                                 | 1890   | 8x6.9               |
| 56       | 25   | 566CVS025MGN | 28                               | 700                                 | 3800   | 10x12.6             |
| 82       | 6.3  | 826CVS6R3MEG | 45                               | 103                                 | 1700   | 6.3X5.9             |
| 82       | 16   | 826CVS016MFG | 40                               | 262                                 | 2120   | 8x6.9               |
| 100      | 4    | 107CVS004MEG | 45                               | 80                                  | 1810   | 6.3X5.9             |
| 100      | 6.3  | 107CVS6R3MEG | 40                               | 126                                 | 1810   | 6.3X5.9             |
| 100      | 16   | 107CVS016MFG | 40                               | 320                                 | 2120   | 8x6.9               |
| 100      | 20   | 107CVS020MFM | 24                               | 400                                 | 3320   | 8x11.9              |
| 100      | 25   | 107CVS025MFM | 30                               | 500                                 | 3320   | 8x11.9              |
| 120      | 6.3  | 127CVS6R3MEG | 40                               | 151                                 | 1810   | 6.3X5.9             |
| 120      | 6.3  | 127CVS6R3MFG | 50                               | 151                                 | 2560   | 8x6.9               |
| 120      | 10   | 127CVS010MFG | 35                               | 240                                 | 2560   | 8x6.9               |
| 150      | 4    | 157CVS004MEG | 40                               | 120                                 | 1810   | 6.3X5.9             |
| 150      | 6.3  | 157CVS6R3MFG | 40                               | 189                                 | 2560   | 8x6.9               |
| 150      | 10   | 157CVS010MFG | 35                               | 300                                 | 2560   | 8x6.9               |
| 150      | 20   | 157CVS020MGN | 20                               | 600                                 | 4320   | 10x12.6             |
| 150      | 25   | 157CVS025MGN | 25                               | 750                                 | 3800   | 10x12.6             |
| 180      | 16   | 187CVS016MFM | 20                               | 576                                 | 3640   | 8x11.9              |
| 180      | 25   | 187CVS025MGN | 25                               | 900                                 | 3800   | 10x12.6             |
| 220      | 2.5  | 227CVS2R5MEG | 23                               | 110                                 | 2390   | 6.3X5.9             |
| 220      | 6.3  | 227CVS6R3MFG | 35                               | 277                                 | 2560   | 8X6.9               |
| 220      | 25   | 227CVS025MGN | 25                               | 1100                                | 3800   | 10x12.6             |
| 270      | 20   | 277CVS020MGN | 20                               | 1080                                | 4320   | 10x12.6             |
| 330      | 4    | 337CVS004MFG | 35                               | 264                                 | 2560   | 8x6.9               |
| 330      | 10   | 337CVS010MFM | 17                               | 660                                 | 3950   | 8x11.9              |
| 330      | 16   | 337CVS016MGN | 16                               | 1056                                | 4720   | 10x12.6             |
| 470      | 2.5  | 477CVS2R5MFG | 23                               | 235                                 | 3300   | 8x6.9               |
| 470      | 6.3  | 477CVS6R3MFM | 15                               | 592                                 | 4210   | 8x11.9              |
| 470      | 16   | 477CVS016MGN | 16                               | 1504                                | 4720   | 10x12.6             |
| 560      | 4    | 567CVS004MFM | 13                               | 448                                 | 4520   | 8x11.9              |
| 560      | 10   | 567CVS010MGN | 13                               | 1120                                | 5230   | 10x12.6             |
| 680      | 2.5  | 687CVS2R5MFM | 13                               | 340                                 | 4520   | 8x11.9              |
| 820      | 6.3  | 827CVS6R3MGN | 12                               | 1033                                | 5440   | 10x12.6             |
| 1000     | 6.3  | 108CVS6R3MGN | 12                               | 1260                                | 5440   | 10x12.6             |
| 1200     | 4    | 128CVS004MGN | 12                               | 960                                 | 5440   | 10x12.6             |
| 1500     | 2.5  | 158CVS2R5MGN | 12                               | 750                                 | 5440   | 10x12.6             |

