



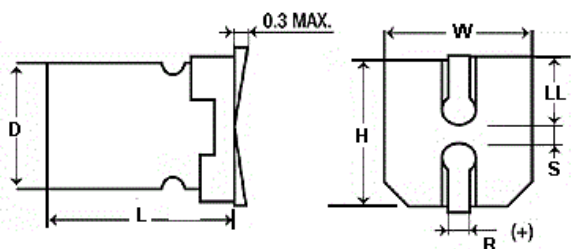
#### FEATURES

High temperature – Very Low ESR – High ripple current – stable with temperature – High frequency

#### APPLICATIONS

DC-DC converters – Voltage regulators – Decoupling

| 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          | 1.15 x rated WVDC                                                                                                                                                                    |   |                                  |    |                |    |                 |  |  |
| Dissipation Factor<br>120 Hz, 20°C                        |               | 15% MAX                                                                                                                                                                              |   |                                  |    |                |    |                 |  |  |
| Leakage Current                                           |               | 2 Minutes                                                                                                                                                                            |   |                                  |    |                |    |                 |  |  |
|                                                           |               | 0.2CV or 280uA, whichever is greater                                                                                                                                                 |   |                                  |    |                |    |                 |  |  |
| Low Temperature Stability<br>Impedance Ratio<br>(100 kHz) | -55°C/ +20°C  | ≤1.25                                                                                                                                                                                |   |                                  |    |                |    |                 |  |  |
|                                                           | +105°C/ +20°C | ≤1.25                                                                                                                                                                                |   |                                  |    |                |    |                 |  |  |
| Load Life                                                 |               | 2000 hours at 105°C with rated WVDC applied                                                                                                                                          |   |                                  |    |                |    |                 |  |  |
|                                                           |               | Capacitance Change                                                                                                                                                                   |   | ≤20% of initial measured value   |    |                |    |                 |  |  |
|                                                           |               | Dissipation Factor                                                                                                                                                                   |   | ≤150% of maximum specified value |    |                |    |                 |  |  |
|                                                           |               | ESR                                                                                                                                                                                  |   | ≤150% of maximum specified value |    |                |    |                 |  |  |
|                                                           |               | Leakage Current                                                                                                                                                                      |   | ≤100% of maximum specified value |    |                |    |                 |  |  |
| Damp Heat test                                            |               | 1000 hours at 60°C with rated voltage applied at 90-95% R.H.                                                                                                                         |   |                                  |    |                |    |                 |  |  |
|                                                           |               | Capacitance Change                                                                                                                                                                   |   | ≤20% of initial measured value   |    |                |    |                 |  |  |
|                                                           |               | Dissipation Factor                                                                                                                                                                   |   | ≤150% of maximum specified value |    |                |    |                 |  |  |
|                                                           |               | ESR                                                                                                                                                                                  |   | ≤150% of maximum specified value |    |                |    |                 |  |  |
|                                                           |               | Leakage Current                                                                                                                                                                      |   | ≤100% of maximum specified value |    |                |    |                 |  |  |
| Resistance to Soldering Heat                              |               | Capacitors placed on a 230°C hot plate for 75 seconds with their electrode terminations facing downward will fulfill the following conditions after being cooled to room temperature |   |                                  |    |                |    |                 |  |  |
|                                                           |               | Capacitance Change                                                                                                                                                                   |   | ≤20% of initial measured value   |    |                |    |                 |  |  |
|                                                           |               | Dissipation Factor                                                                                                                                                                   |   | ≤150% of maximum specified value |    |                |    |                 |  |  |
|                                                           |               | ESR                                                                                                                                                                                  |   | ≤150% of maximum specified value |    |                |    |                 |  |  |
|                                                           |               | Leakage Current                                                                                                                                                                      |   | ≤100% of maximum specified value |    |                |    |                 |  |  |
| Ripple Current Multipliers                                |               | Frequency (Hz)                                                                                                                                                                       |   |                                  |    |                |    |                 |  |  |
|                                                           |               | 120Hz≤f<1kHz                                                                                                                                                                         |   | 1kHz≤f<10kHz                     |    | 10kHz≤f<100kHz |    | 100kHz≤f≤500kHz |  |  |
|                                                           |               | 0.05                                                                                                                                                                                 |   | 0.3                              |    | 0.7            |    | 1.0             |  |  |



| D+0.5 | W+0.2 | H+0.2 | LL+0.2 | R+0.15 | S+0.2 |
|-------|-------|-------|--------|--------|-------|
| 6.3   | 6.6   | 6.6   | 2.1    | .65    | 1.9   |
| 8     | 8.3   | 8.3   | 2.8    | .95    | 3.2   |

# UVG

**+105°C Low ESR Standard**

| Capacitance<br>( $\mu$ F) | WVDC | IC PART NUMBER                | Maximum<br>ESR ( $\Omega$ )<br>120 Hz,<br>+20°C | Maximum<br>ESR (m $\Omega$ )<br>100 kHz,<br>+20°C | Leakage<br>Current<br>( $\mu$ A) | Maximum<br>RMS<br>Ripple<br>Current<br>(mA)<br>120 kHz,<br>+105°C | Dims DxL<br>(mm) |
|---------------------------|------|-------------------------------|-------------------------------------------------|---------------------------------------------------|----------------------------------|-------------------------------------------------------------------|------------------|
| 22                        | 20   | <a href="#">226UVG020MEW</a>  | 11.3                                            | 60                                                | 280                              | 1450                                                              | 6.3x6            |
| 47                        | 20   | <a href="#">476UVG020MFF</a>  | 5.29                                            | 45                                                | 280                              | 1890                                                              | 8x8              |
| 47                        | 25   | <a href="#">476UVG025MEW</a>  | 5.29                                            | 70                                                | 280                              | 1600                                                              | 6.3x6            |
| 47                        | 25   | <a href="#">476UVG025MFE</a>  | 5.29                                            | 45                                                | 280                              | 1600                                                              | 8x10.2           |
| 100                       | 20   | <a href="#">107UVG020MFBJ</a> | 2.49                                            | 30                                                | 400                              | 2960                                                              | 8x12             |
| 180                       | 16   | <a href="#">187UVG016MFBJ</a> | 1.38                                            | 20                                                | 576                              | 3640                                                              | 8x12             |
| 330                       | 2.5  | <a href="#">337UVG2R5MEW</a>  | 0.75                                            | 26                                                | 280                              | 2247                                                              | 6.3x6            |
| 330                       | 4    | <a href="#">337UVG4R0MEW</a>  | 0.75                                            | 21                                                | 280                              | 2630                                                              | 6.3x6            |
| 330                       | 10   | <a href="#">337UVG010MFBJ</a> | 0.75                                            | 17                                                | 660                              | 3950                                                              | 8x12             |
| 470                       | 6.3  | <a href="#">477UVG6R3MFBJ</a> | 0.53                                            | 15                                                | 592                              | 4210                                                              | 8x12             |
| 560                       | 2.5  | <a href="#">567UVG2R5MFE</a>  | 0.44                                            | 15                                                | 280                              | 4210                                                              | 8x10.2           |
| 560                       | 4    | <a href="#">567UVG4R0MFBJ</a> | 0.44                                            | 15                                                | 448                              | 4000                                                              | 8x12             |
| 560                       | 10   | <a href="#">567UVG010MFBJ</a> | 0.44                                            | 17                                                | 1120                             | 3950                                                              | 8x12             |
| 680                       | 2.5  | <a href="#">687UVG2R5MFBJ</a> | 0.37                                            | 13                                                | 340                              | 4520                                                              | 8x12             |
| 820                       | 6.3  | <a href="#">827UVG6R3MFBJ</a> | 0.3                                             | 15                                                | 1033                             | 4210                                                              | 8x12             |