

RADIAL TYPE

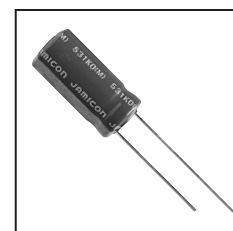
TM

Series

High Reliability, Wide Temperature Range

JAMICON®

- High temperature 105°C and high reliability.
- Good reliability series for communication equipment and industrial measurement instruments.



● SPECIFICATION

| Item | Characteristic | | | | | | | | | | | | | | |
|--|---|--|------|------|-------|------|--------|------------------------------------|---------|------|---------|------|------|------|------|
| Operation Temperature Range | -40 ~ +105°C | | | | | | | -25 ~ +105°C | | | | | | | |
| Rated Working Voltage | 6.3 ~ 100VDC | | | | | | | 160~450VDC | | | | | | | |
| Capacitance Tolerance (120Hz 20°C) | ±20%(M) | | | | | | | +50% -10%(T) | | | | | | | |
| Leakage Current (20°C) | $I \leq 0.01CV$ or $4 (\mu A)$ | | | | | | | $I \leq 0.03CV + 40 (\mu A)_{max}$ | | | | | | | |
| | *Whichever is greater after 3 minutes I : Leakage Current(μA) C : Rated Capacitance(μF) V : Working Voltage(V) | | | | | | | | | | | | | | |
| Surge Voltage (20°C) | W.V. | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 100 | 160 | 200 | 250 | 350 | 400 | 450 |
| | S.V. | 8 | 13 | 20 | 32 | 44 | 63 | 79 | 125 | 200 | 250 | 300 | 400 | 450 | 500 |
| Dissipation Factor (tan δ) (120Hz 20°C) | Add 0.02 per 1000 μF for more than 1000 μF | | | | | | | | | | | | | | |
| | W.V. | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 100 | 160 | 200 | 250 | 350 | 400 | 450 |
| | tan δ | 0.20 | 0.17 | 0.15 | 0.12 | 0.10 | 0.09 | 0.09 | 0.07 | 0.15 | 0.12 | 0.10 | 0.15 | 0.15 | 0.15 |
| Low Temperature Stability | Impedance ratio at 120Hz | | | | | | | | | | | | | | |
| | Rated Voltage (V) | | 6.3 | | 10~16 | | 25~100 | | 160~250 | | 350~400 | | 450 | | |
| | -25°C / +20°C | | 4 | | 3 | | 2 | | 4 | | 8 | | 15 | | |
| | -40°C / +20°C | | 8 | | 6 | | 4 | | — | | — | | — | | |
| Load Life | After 2000 hours application of W.V. and +105°C ripple current value, the capacitor shall meet the following limits. (DC + ripple peak voltage \leq rate working voltage) | | | | | | | | | | | | | | |
| | Capacitance Change | $\leq \pm 25\%$ of initial value for 6.3~16W.V., $\leq \pm 20\%$ of initial value for 25~450W.V. | | | | | | | | | | | | | |
| | Dissipation Factor | $\leq 200\%$ of initial specified value | | | | | | | | | | | | | |
| | Leakage current | \leq initial specified value | | | | | | | | | | | | | |
| Shelf Life | At +105°C no voltage application after 1000 hours the capacitor shall meet the following limits. (with voltage treatment) | | | | | | | | | | | | | | |
| | Capacitance Change | $\leq \pm 20\%$ of initial value | | | | | | | | | | | | | |
| | Dissipation Factor | $\leq 200\%$ of initial specified value | | | | | | | | | | | | | |
| | Leakage current | $\leq 200\%$ of initial specified value | | | | | | | | | | | | | |

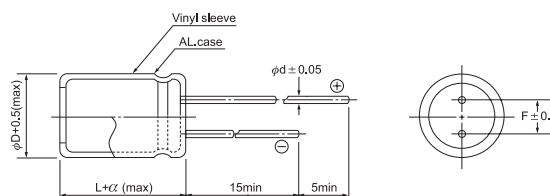
● DIMENSIONS (mm)

| ϕD | 5 | 6.3 | 8 | 10 | 12.5 | 16 | 18 |
|----------|-----|-----|-----|-----|------|-----|-----|
| F | 2.0 | 2.5 | 3.5 | 5.0 | 5.0 | 7.5 | 7.5 |
| d | 0.5 | 0.5 | 0.6 | 0.6 | 0.6 | 0.8 | 0.8 |
| α | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |

● RIPPLE CURRENT COEFFICIENTS

| Temperature(°C) | 65 | 85 | 105 |
|-----------------|------|------|------|
| Multiplier | 1.80 | 1.50 | 1.00 |

| Frequency(Hz) | 60 | 120 | 1k | $\geq 10k$ |
|---------------|------------|------|------|------------|
| W.V. | Multiplier | | | |
| 6.3~25V | 0.80 | 1.00 | 1.15 | 1.20 |
| 35~100V | 0.75 | 1.00 | 1.30 | 1.40 |
| 160~450V | 0.70 | 1.00 | 1.40 | 1.60 |



● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
Max ripple current : mA(rms) 105°C 120Hz

| μF | V(Code) | | 6.3 (0J) | | 10 (1A) | | 16 (1C) | |
|-------|---------|------|----------|------|---------|------|---------|------|
| | Code | Item | DxL | R.C. | DxL | R.C. | DxL | R.C. |
| 47 | 470 | | | | | → | 5x11 | 85 |
| 100 | 101 | | 6.3x11 | 120 | 6.3x11 | 130 | 6.3x11 | 140 |
| 220 | 221 | | 6.3x11 | 180 | 6.3x11 | 190 | 8x11.5 | 240 |
| 330 | 331 | | 8x11.5 | 260 | 8x11.5 | 280 | 10x12.5 | 310 |
| 470 | 471 | | 8x11.5 | 310 | 8x11.5 | 330 | 10x12.5 | 370 |
| 1000 | 102 | | 10x12.5 | 470 | 10x16 | 570 | 10x20 | 660 |
| 2200 | 222 | | 10x20 | 810 | 12.5x20 | 930 | 12.5x25 | 1090 |
| 3300 | 332 | | 12.5x20 | 1020 | 12.5x25 | 1200 | 16x25 | 1270 |
| 4700 | 472 | | 12.5x25 | 1260 | 16x25 | 1350 | 16x31.5 | 1560 |
| 6800 | 682 | | 16x25 | 1430 | 16x31.5 | 1660 | 18x35.5 | 1940 |
| 10000 | 103 | | 16x31.5 | 1730 | 18x35.5 | 2030 | 18x40 | 2200 |
| 15000 | 153 | | 18x35.5 | 2120 | 18x40 | 2310 | | |

| μF | V(Code) | | 25 (1E) | | 35 (1V) | | 50 (1H) | |
|------|---------|------|---------|------|---------|------|---------|------|
| | Code | Item | DxL | R.C. | DxL | R.C. | DxL | R.C. |
| 0.47 | R47 | | | | | → | 5x11 | 11 |
| 1 | 010 | | | | | → | 5x11 | 16 |
| 2.2 | 2R2 | | | | | → | 5x11 | 23 |
| 3.3 | 3R3 | | | | | → | 5x11 | 29 |
| 4.7 | 4R7 | | | | | → | 5x11 | 34 |
| 10 | 100 | | 5x11 | 43 | 5x11 | 47 | 5x11 | 50 |
| 22 | 220 | | 5x11 | 65 | 6.3x11 | 80 | 6.3x11 | 85 |
| 33 | 330 | | 6.3x11 | 90 | 6.3x11 | 100 | 8x11.5 | 120 |
| 47 | 470 | | 6.3x11 | 110 | 8x11.5 | 140 | 8x11.5 | 140 |
| 100 | 101 | | 8x11.5 | 180 | 8x11.5 | 200 | 10x12.5 | 220 |
| 220 | 221 | | 10x12.5 | 280 | 10x12.5 | 310 | 10x16 | 360 |
| 330 | 331 | | 10x12.5 | 350 | 10x16 | 420 | 10x20 | 490 |
| 470 | 471 | | 10x16 | 460 | 10x20 | 560 | 12.5x20 | 630 |
| 1000 | 102 | | 12.5x20 | 790 | 12.5x25 | 960 | 16x25 | 1010 |
| 2200 | 222 | | 16x25 | 1210 | 16x31.5 | 1440 | 18x35.5 | 1700 |
| 3300 | 332 | | 16x31.5 | 1530 | 18x35.5 | 1840 | 18x40 | 2020 |
| 4700 | 472 | | 18x35.5 | 1890 | 18x40 | 2100 | | |
| 6800 | 682 | | 18x40 | 2170 | | | | |

| μF | V(Code) | | 63 (1J) | | 100 (2A) | |
|------|---------|------|---------|------|----------|------|
| | Code | Item | DxL | R.C. | DxL | R.C. |
| 0.47 | R47 | | | → | 5x11 | 12 |
| 1 | 010 | | | → | 5x11 | 18 |
| 2.2 | 2R2 | | | → | 5x11 | 27 |
| 3.3 | 3R3 | | | → | 5x11 | 33 |
| 4.7 | 4R7 | | | → | 5x11 | 39 |
| 10 | 100 | | 5x11 | 50 | 6.3x11 | 65 |
| 22 | 220 | | 6.3x11 | 85 | 8x11.5 | 110 |
| 33 | 330 | | 8x11.5 | 120 | 10x12.5 | 140 |
| 47 | 470 | | 10x12.5 | 150 | 10x16 | 190 |
| 100 | 101 | | 10x16 | 250 | 12.5x20 | 330 |
| 220 | 221 | | 10x20 | 400 | 16x25 | 540 |
| 330 | 331 | | 12.5x20 | 530 | 16x25 | 660 |
| 470 | 471 | | 12.5x25 | 690 | 16x31.5 | 870 |
| 1000 | 102 | | 16x31.5 | 1120 | | |

All blank voltage on sleeve marking is the same voltage as " → "point to.

● CASE SIZE & MAX RIPPLE CURRENT

Case size : D x L (mm)
 Max ripple current : mA(rms) 105°C 120Hz

| μF | V(Code) | | 160 (2C) | | 200 (2D) | | 250 (2E) | |
|------|---------|------|----------|------|----------|------|----------|------|
| | Code | Item | DxL | R.C. | DxL | R.C. | DxL | R.C. |
| 0.47 | R47 | | 6.3x11 | 13 | 6.3x11 | 14 | 6.3x11 | 15 |
| 1 | 010 | | 6.3x11 | 19 | 6.3x11 | 20 | 8x11.5 | 26 |
| 2.2 | 2R2 | | 6.3x11 | 28 | 6.3x11 | 30 | 8x11.5 | 38 |
| 3.3 | 3R3 | | 8x11.5 | 40 | 8x11.5 | 43 | 10x12.5 | 49 |
| 4.7 | 4R7 | | 8x11.5 | 48 | 10x12.5 | 55 | 10x12.5 | 60 |
| 10 | 100 | | 10x12.5 | 75 | 10x16 | 90 | 10x20 | 110 |
| 22 | 220 | | 10x20 | 140 | 10x20 | 140 | 12.5x20 | 170 |
| 33 | 330 | | 12.5x20 | 180 | 12.5x20 | 190 | 12.5x25 | 220 |
| 47 | 470 | | 12.5x25 | 230 | 12.5x25 | 250 | 16x25 | 270 |
| 100 | 101 | | 16x25 | 340 | 16x31.5 | 400 | 16x35.5 | 460 |
| 220 | 221 | | 18x35.5 | 630 | 18x40 | 710 | | |

| μF | V(Code) | | 350 (2V) | | 400 (2G) | | 450 (2W) | |
|-----|---------|------|----------|------|----------|------|----------|------|
| | Code | Item | DxL | R.C. | DxL | R.C. | DxL | R.C. |
| 1 | 010 | | 10x12.5 | 19 | 10x12.5 | 20 | 10x18 | 20 |
| 2.2 | 2R2 | | 10x16 | 32 | 10x18 | 35 | 12.5x20 | 33 |
| 3.3 | 3R3 | | 10x20 | 43 | 12.5x20 | 48 | 12.5x25 | 45 |
| 4.7 | 4R7 | | 12.5x20 | 55 | 12.5x20 | 55 | 16x25 | 55 |
| 10 | 100 | | 12.5x25 | 85 | 12.5x25 | 90 | 16x31.5 | 85 |
| 22 | 220 | | 16x31.5 | 140 | 16x31.5 | 150 | 16x35.5 | 140 |
| 33 | 330 | | 18x35.5 | 200 | 18x35.5 | 210 | 18x40 | 190 |
| 47 | 470 | | 18x40 | 250 | 18x40 | 260 | | |