

Type VPR –55 to 105 °C Radial Leaded Aluminum Electrolytic

Low ESR, Optional 3rd Lead Case Styles, Aluminum Electrolytic Capacitors



Type VPR is a radial leaded aluminum electrolytic capacitor with a 105 °C, 2000 hours long life ratings. The VPR has 3 optional case styles with a third lead. The low ESR rating makes it ideal for output filtering in switching power supplies.

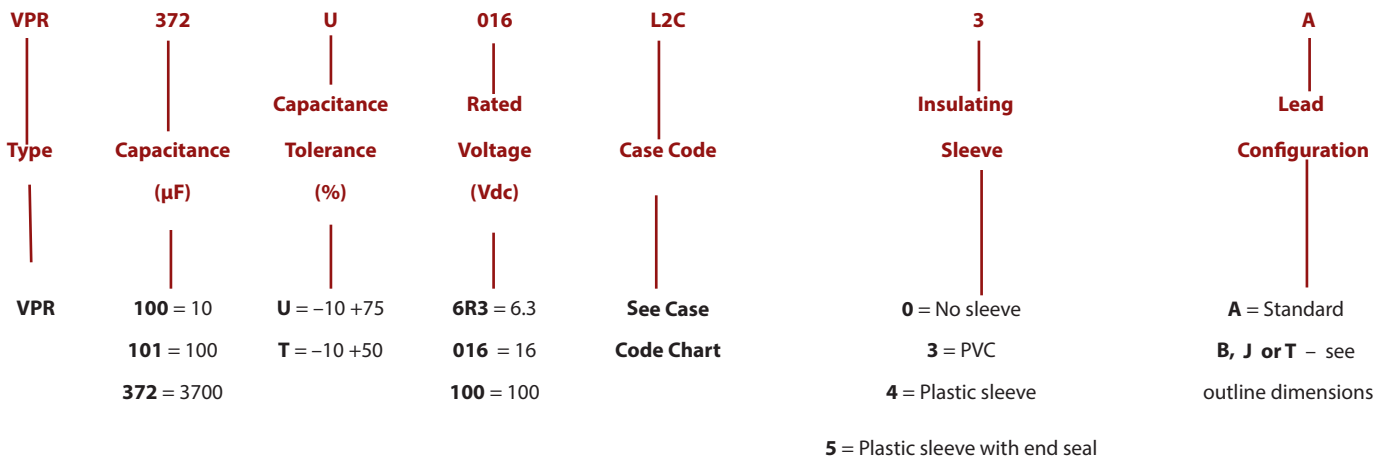
Highlights

- 105 °C
- Long life
- Low ESR
- High reliability

Specifications

| Temperature Range | -55 °C to +105 °C | | | | | | | | | | | | | | |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|------|-----|----|------|----|----|------------|------|------|------|-----|---|------|
| Rated Voltage Range | 6.3 to 100 Vdc (250 Vdc on special request) | | | | | | | | | | | | | | |
| Capacitance Range | 250 to 12,000 μF | | | | | | | | | | | | | | |
| Capacitance Tolerance | -10% +75% (others on special request) | | | | | | | | | | | | | | |
| Leakage Current | I = .002 CV after 2 minutes @ 25 °C C = Capacitance in (μF) V = Rated voltage I = Leakage current in μA | | | | | | | | | | | | | | |
| Ripple Current Multipliers | <table border="1"> <thead> <tr> <th>Temperature (°C)</th> <th>45</th> <th>55</th> <th>65</th> <th>75</th> <th>85</th> <th>95</th> </tr> </thead> <tbody> <tr> <td>Multiplier</td> <td>1.66</td> <td>1.52</td> <td>1.37</td> <td>1.2</td> <td>1</td> <td>0.75</td> </tr> </tbody> </table> | Temperature (°C) | 45 | 55 | 65 | 75 | 85 | 95 | Multiplier | 1.66 | 1.52 | 1.37 | 1.2 | 1 | 0.75 |
| Temperature (°C) | 45 | 55 | 65 | 75 | 85 | 95 | | | | | | | | | |
| Multiplier | 1.66 | 1.52 | 1.37 | 1.2 | 1 | 0.75 | | | | | | | | | |
| QA Stability Test | Apply WVDC for 2000 h at 105 °C Capacitance change within 15% of initial limits DC leakage current meets initial limits ESR ≤ 150% of initial measured value | | | | | | | | | | | | | | |
| RoHS Compliant | | | | | | | | | | | | | | | |

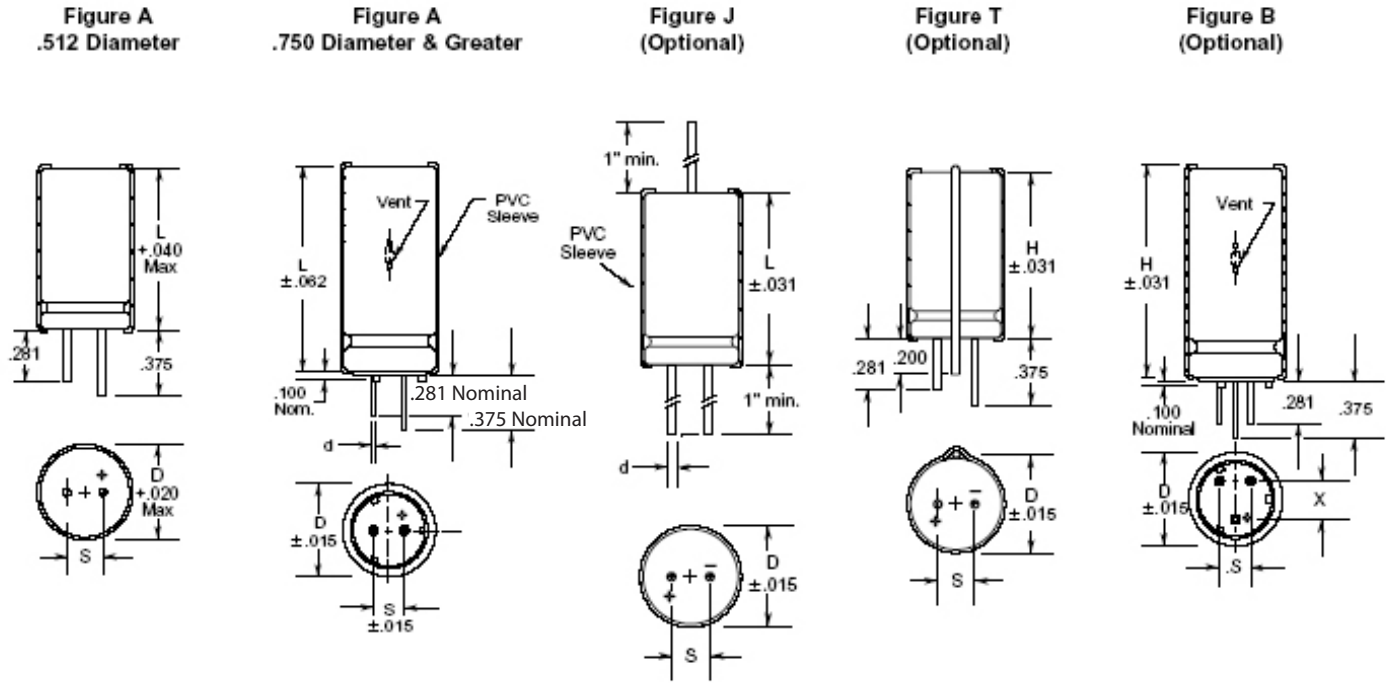
Part Numbering System



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Outline Drawing



PVC sleeve adds .015 to diameter and length.

(Inches)

Case Code

Case Code Chart
Uninsulated Case Size

| Case Code | Inches | | | Millimeters | | | Lead Wire Size | |
|-----------|--------|-------|------|-------------|------|-------|----------------|-----|
| | D | L | S | D | L | S | Inches | AWG |
| L1C | 0.875 | 1.125 | 0.30 | 22.2 | 28.6 | 7.62 | 0.04 | #18 |
| L1L | 0.875 | 1.625 | 0.30 | 22.2 | 41.3 | 7.62 | 0.04 | #18 |
| L2C | 0.875 | 2.125 | 0.30 | 22.2 | 53.9 | 7.62 | 0.04 | #18 |
| L2L | 0.875 | 2.625 | 0.30 | 22.2 | 66.7 | 7.62 | 0.04 | #18 |
| L3C | 0.875 | 3.125 | 0.30 | 22.2 | 79.4 | 7.62 | 0.04 | #18 |
| L3L | 0.875 | 3.625 | 0.30 | 22.2 | 92.1 | 7.62 | 0.04 | #18 |
| N1C | 1.000 | 1.125 | 0.40 | 25.4 | 28.6 | 10.16 | 0.04 | #18 |
| N1L | 1.000 | 1.625 | 0.40 | 25.4 | 41.3 | 10.16 | 0.04 | #18 |
| N2C | 1.000 | 2.125 | 0.40 | 25.4 | 53.9 | 10.16 | 0.04 | #18 |
| N2L | 1.000 | 2.625 | 0.40 | 25.4 | 66.7 | 10.16 | 0.04 | #18 |
| N3C | 1.000 | 3.125 | 0.40 | 25.4 | 79.4 | 10.16 | 0.04 | #18 |
| N3L | 1.000 | 3.625 | 0.40 | 25.4 | 92.1 | 10.16 | 0.04 | #18 |

Type VPR -55 to 105 °C Radial Leaded Aluminum Electrolytic

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Ratings

| Cap (μ F) | Catalog Part Number | Max ESR 10 kHz 25 °C (Ω) | Max Ripple 10 kHz 85 °C (A) | Size in. (mm) | | | |
|---------------------------------|------------------------|--------------------------------------------|--------------------------------------|-----------------|---------------|-------------------|------------------|
| | | | | Diameter (D) | Length (L) | Lead Space (S) | Lead Dia. (d) |
| 6.3 Vdc (8 Volts Surge) | | | | | | | |
| 5,600 | VPR562U6R3N1L | 0.034 | 3.767 | 1.000 (25.4) | 1.625 (41.3) | 0.40 (10.2) | 0.040 (1.0) |
| 8,800 | VPR882U6R3N2C | 0.023 | 5.131 | 1.000 (25.4) | 2.125 ((54.0) | 0.40 (10.2) | 0.040 (1.0) |
| 12,000 | VPR123U6R3N2L | 0.018 | 6.364 | 1.000 (25.4) | 2.625 (66.7) | 0.40 (10.2) | 0.040 (1.0) |
| 7.5 Vdc (10 Volts Surge) | | | | | | | |
| 4,900 | VPR492U7R5N1L | 0.031 | 3.820 | 1.000 (25.4) | 1.625 (41.3) | 0.40 (10.2) | 0.040 (1.0) |
| 10 Vdc (13 Volts Surge) | | | | | | | |
| 4,200 | VPR422U010N1L | 0.032 | 3.702 | 1.000 (25.4) | 1.625 (41.3) | 0.40 (10.2) | 0.040 (1.0) |
| 12 Vdc (18 Volts Surge) | | | | | | | |
| 5,600 | VPR562U012N2C | 0.021 | 4.932 | 1.000 (25.4) | 2.125 ((54.0) | 0.40 (10.2) | 0.040 (1.0) |
| 16 Vdc (20 Volts Surge) | | | | | | | |
| 2,300 | VPR232U016L1L | 0.040 | 2.863 | 0.875 (22.2) | 1.625 (41.3) | 0.30 (7.6) | 0.040 (1.0) |
| 3,200 | VPR322U016N1L | 0.029 | 3.637 | 1.000 (25.4) | 1.625 (41.3) | 0.40 (10.2) | 0.040 (1.0) |
| 3,700 | VPR372U016L2C | 0.026 | 3.981 | 0.875 (22.2) | 2.125 ((54.0) | 0.30 (7.6) | 0.040 (1.0) |
| 5,000 | VPR502U016N2C | 0.020 | 4.887 | 1.000 (25.4) | 2.125 ((54.0) | 0.40 (10.2) | 0.040 (1.0) |
| 6,900 | VPR692U016N2L | 0.017 | 6.105 | 1.000 (25.4) | 2.625 (66.7) | 0.40 (10.2) | 0.040 (1.0) |
| 10,000 | VPR103U016N3L | 0.012 | 8.033 | 1.000 (25.4) | 3.625 (92.1) | 0.40 (10.2) | 0.040 (1.0) |
| 25 Vdc (30 Volts Surge) | | | | | | | |
| 640 | VPR641U025E1L | 0.067 | 2.390 | 0.512 (13.0) | 1.654 (42.0) | 0.20 (5.1) | 0.023 (.58) |
| 1,300 | VPR132U025L1L | 0.035 | 2.729 | 0.875 (22.2) | 1.625 (41.3) | 0.30 (7.6) | 0.040 (1.0) |
| 1,800 | VPR182U025N1L | 0.035 | 3.006 | 1.000 (25.4) | 1.625 (41.3) | 0.40 (10.2) | 0.040 (1.0) |
| 2,800 | VPR282U025L2L | 0.018 | 4.732 | 0.875 (22.2) | 2.625 (66.7) | 0.30 (7.6) | 0.040 (1.0) |
| 2,800 | VPR282U025N2C | 0.023 | 4.107 | 1.000 (25.4) | 2.125 ((54.0) | 0.40 (10.2) | 0.040 (1.0) |
| 3,900 | VPR392U025N2L | 0.018 | 5.191 | 1.000 (25.4) | 2.625 (66.7) | 0.40 (10.2) | 0.040 (1.0) |
| 5,900 | VPR592U025N3L | 0.014 | 6.616 | 1.000 (25.4) | 3.625 (92.1) | 0.40 (10.2) | 0.040 (1.0) |

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| Cap (μ F) | Catalog Part Number | Max ESR 10 kHz 25 °C (Ω) | Max Ripple 10 kHz 85 °C (A) | Size in. (mm) | | | |
|----------------------------------|------------------------|--------------------------------------------|--------------------------------------|-----------------|---------------|-------------------|------------------|
| | | | | Diameter (D) | Length (L) | Lead Space (S) | Lead Dia. (d) |
| 40 Vdc (50 Volts Surge) | | | | | | | |
| 760 | VPR761U040L1L | 0.040 | 2.194 | 0.875 (22.2) | 1.625 (41.3) | 0.30 (7.6) | 0.040 (1.0) |
| 1,600 | VPR162U040N2C | 0.021 | 3.755 | 1.000 (25.4) | 2.125 (54.0) | 0.40 (10.2) | 0.040 (1.0) |
| 2,200 | VPR222U040N2L | 0.017 | 4.732 | 1.000 (25.4) | 2.625 (66.7) | 0.40 (10.2) | 0.040 (1.0) |
| 2,800 | VPR282U040N3C | 0.014 | 5.651 | 1.000 (25.4) | 3.125 (79.4) | 0.40 (10.2) | 0.040 (1.0) |
| 3,300 | VPR332U040N3L | 0.014 | 6.437 | 1.000 (25.4) | 3.625 (92.1) | 0.40 (10.2) | 0.040 (1.0) |
| 50 Vdc (65 Volts Surge) | | | | | | | |
| 600 | VPR601U050L1L | 0.049 | 1.964 | 0.875 (22.2) | 1.625 (41.3) | 0.30 (7.6) | 0.040 (1.0) |
| 1,200 | VPR122U050N2C | 0.028 | 3.297 | 1.000 (25.4) | 2.125 (54.0) | 0.40 (10.2) | 0.040 (1.0) |
| 2,400 | VPR242U050N3L | 0.015 | 5.639 | 1.000 (25.4) | 3.625 (92.1) | 0.40 (10.2) | 0.040 (1.0) |
| 75 Vdc (95 Volts Surge) | | | | | | | |
| 450 | VPR451U075N1L | 0.102 | 1.779 | 1.000 (25.4) | 1.625 (41.3) | 0.40 (10.2) | 0.040 (1.0) |
| 680 | VPR681U075N2C | 0.069 | 2.420 | 1.000 (25.4) | 2.125 (54.0) | 0.40 (10.2) | 0.040 (1.0) |
| 1,100 | VPR112U075N3C | 0.044 | 3.577 | 1.000 (25.4) | 3.125 (79.4) | 0.40 (10.2) | 0.040 (1.0) |
| 100 Vdc (125 Volts Surge) | | | | | | | |
| 250 | VPR251U100N1L | 0.111 | 1.818 | 1.000 (25.4) | 1.625 (41.3) | 0.40 (10.2) | 0.040 (1.0) |

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