

# Type 300/301 –55 °C to 105 °C Long-Life, Switching Power Grade Radial

## High Capacitance and Ultra-Low ESR



The Types 300 and 301 are the wide-temperature, low-ESR capacitors for power-supply outputs and UPS battery stiffening. The exceptionally low ESRs enable high ripple-current capability. With series inductance of 12 to 16 nH and ripple currents to 16 amps one of these capacitors can save by replacing three or four of the 12.5 mm diameter capacitors routinely at the output of switching power supplies. Type 300 has three leads for rugged, reverse-proof mounting, and Type 301 has two leads. Types 300R and 301R deliver even lower ESR and higher ripple.

### Highlights

- 4000 hour load life
- Ripple Current to 16 amps
- ESRs to 6 mΩ
- > 90% capacitance at –40 °C
- Replaces multiple capacitors

### Specifications

|                            |                                                     |       |        |        |       |       |             |
|----------------------------|-----------------------------------------------------|-------|--------|--------|-------|-------|-------------|
| Temperature Range          | –55 °C to +105 °C                                   |       |        |        |       |       |             |
| Rated Voltage Range        | 6.3 to 250 Vdc                                      |       |        |        |       |       |             |
| Capacitance Range          | 8.2 μF to 33,000 μF                                 |       |        |        |       |       |             |
| Capacitance Tolerance      | 6.3 to 100 Vdc; –10 + 75%, 160 to 250 Vdc; –10 +50% |       |        |        |       |       |             |
| Leakage Current            | ≤0.5 $\sqrt{CV}$ μA, 4 mA max, 5 minutes            |       |        |        |       |       |             |
| Ripple Current Multipliers | Ambient Temperature                                 |       |        |        |       |       |             |
|                            | 45 °C                                               | 55 °C | 65 °C  | 75 °C  | 85 °C | 95 °C | 105 °C      |
|                            | 1.66                                                | 1.52  | 1.37   | 1.20   | 1.00  | 0.75  | 0.36        |
|                            | Frequency                                           |       |        |        |       |       |             |
|                            | 50 Hz                                               | 60 Hz | 120 Hz | 360 Hz | 1 kHz | 5 kHz | 10 kHz & up |
|                            | <b>Less than .77" Diameter</b>                      |       |        |        |       |       |             |
|                            | 6.3 & 7.5 V                                         | 0.76  | 0.81   | 1.00   | 1.23  | 1.35  | 1.41        |
|                            | 10 to 40 V                                          | 0.74  | 0.79   | 1.00   | 1.29  | 1.46  | 1.55        |
|                            | 50V                                                 | 0.72  | 0.78   | 1.00   | 1.33  | 1.54  | 1.67        |
|                            | 63 & 75 V                                           | 0.71  | 0.76   | 1.00   | 1.38  | 1.64  | 1.82        |
|                            | 100 to 250 V                                        | 0.68  | 0.74   | 1.00   | 1.51  | 2.00  | 2.51        |
|                            | <b>.77" Diameter</b>                                |       |        |        |       |       |             |
|                            | 6.3 & 7.5 V                                         | 0.82  | 0.86   | 1.00   | 1.15  | 1.21  | 1.24        |
|                            | 10 to 40 V                                          | 0.78  | 0.83   | 1.00   | 1.20  | 1.30  | 1.35        |
|                            | 50V                                                 | 0.76  | 0.81   | 1.00   | 1.25  | 1.38  | 1.45        |
|                            | 63 & 75 V                                           | 0.74  | 0.80   | 1.00   | 1.28  | 1.43  | 1.52        |
|                            | 100 to 250 V                                        | 0.76  | 0.81   | 1.00   | 1.24  | 1.37  | 1.44        |
|                            | <b>.895" Diameter</b>                               |       |        |        |       |       |             |
|                            | 6.3 & 7.5 V                                         | 0.82  | 0.86   | 1.00   | 1.14  | 1.20  | 1.23        |
|                            | 10 to 40 V                                          | 0.80  | 0.84   | 1.00   | 1.17  | 1.25  | 1.29        |
|                            | 50V                                                 | 0.75  | 0.80   | 1.00   | 1.27  | 1.42  | 1.50        |
|                            | 63 & 75 V                                           | 0.75  | 0.80   | 1.00   | 1.26  | 1.40  | 1.48        |
|                            | 100 to 250 V                                        | 0.76  | 0.81   | 1.00   | 1.25  | 1.38  | 1.46        |
|                            | <b>1.02" Diameter</b>                               |       |        |        |       |       |             |
|                            | 6.3 & 7.5 V                                         | 0.84  | 0.88   | 1.00   | 1.12  | 1.17  | 1.19        |
|                            | 10 to 40 V                                          | 0.81  | 0.86   | 1.00   | 1.15  | 1.22  | 1.25        |
|                            | 50V                                                 | 0.76  | 0.81   | 1.00   | 1.23  | 1.35  | 1.42        |
|                            | 63 & 75 V                                           | 0.77  | 0.81   | 1.00   | 1.23  | 1.35  | 1.42        |
|                            | 100 to 250 V                                        | 0.76  | 0.81   | 1.00   | 1.24  | 1.37  | 1.44        |

# Type 300/301 –55 °C to 105 °C Long-Life, Switching Power Grade Radial

## High Capacitance and Ultra-Low ESR

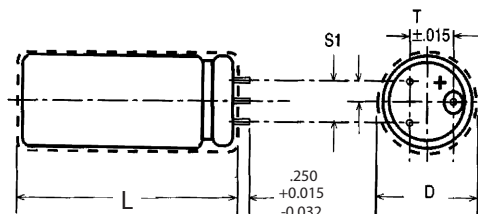
|                                                                                  |                                                                                                                                                                           |
|----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Load Life</b><br>RoHS, $\geq .77''$<br>RoHS, $< .77''$<br>Non-RoHS, $< .77''$ | 4000 h at full load at 85 °C<br>2000 h at full load at 85 °C<br>4000 h at full load at 85 °C<br>$\Delta$ Capacitance $\pm 20\%$<br>ESR 200% of limit<br>DCL 100% of limit |
| <b>Shelf Life Test</b>                                                           | 500 h at 105 °C, capacitance, ESR and DCL, initial requirements                                                                                                           |
| <b>Vibration</b>                                                                 | 10 to 55 Hz, 0.06" and 10 g max, 2 h each plane                                                                                                                           |

## Part Numbering System

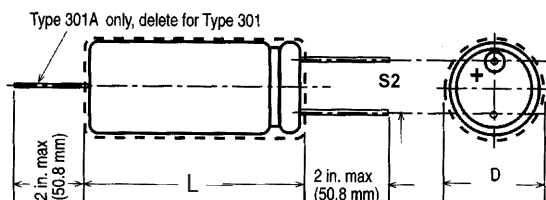
|                                                      |                                                                                               |                                                          |                                               |                             |                  |                                                                                                                        |                               |
|------------------------------------------------------|-----------------------------------------------------------------------------------------------|----------------------------------------------------------|-----------------------------------------------|-----------------------------|------------------|------------------------------------------------------------------------------------------------------------------------|-------------------------------|
| <b>NR</b>                                            | <b>301R</b>                                                                                   | <b>333</b>                                               | <b>U</b>                                      | <b>6R3</b>                  | <b>JS</b>        | <b>2</b>                                                                                                               | <b>E</b>                      |
| <b>RoHS</b>                                          | <b>Type</b>                                                                                   | <b>Capacitance</b>                                       | <b>Tolerance</b>                              | <b>Voltage</b>              | <b>Case Code</b> | <b>Insulation</b>                                                                                                      | <b>Epoxy</b>                  |
| Blank = Compliant<br>NR = Non Compliant (exceeds Pb) | 300 - 3 leads<br>300R - 3 leads, low ESR<br>301R - 2 leads, low ESR<br>301A - Laydown 3 leads | 152 = 1500 $\mu$ F<br>102 = 1000 $\mu$ F<br>U = -10 +75% | M = $\pm 20$<br>T = 10% +50%<br>100 = 100 Vdc | 6R3 = 6.3 V<br>063 = 63 Vdc |                  | 0 = bare can<br>1 = Polyester<br>2 = PVC w/standoffs*<br>9 = Polyester w/standoffs*<br>*Not available in .77" diameter | E = epoxy<br>Blank = no epoxy |

## Outline Drawing

0.77", 0.895" and 1.02" Diameters

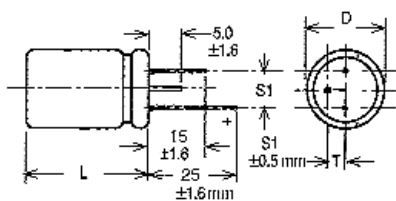


Type  
300/300R  
Three  
Leads

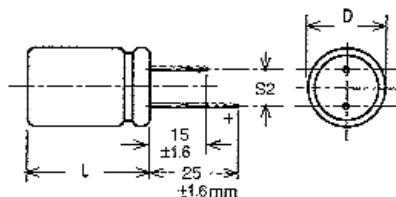


Type  
301/301R  
Two  
Leads

0.51", 0.65" and .73" Diameters



Type 300/300R  
Three Leads



Type 301/301R  
Two Leads

# Type 300/301 –55 °C to 105 °C Long-Life, Switching Power Grade Radial

## High Capacitance and Ultra-Low ESR

### Case Dimensions

| Case Code                      | Insulated<br>D ± 0.015 (0.4 mm)<br>L ± 0.062 (1.6 mm)<br>D x L | Epoxy endseal<br>L Max | Bare Can<br>D ± 0.015 (0.4 mm)<br>L ± 0.030 (0.8 mm)<br>D x L | Lead Spacing                     |                                       | Lead Diameter<br>dia. | AWG   |    |
|--------------------------------|----------------------------------------------------------------|------------------------|---------------------------------------------------------------|----------------------------------|---------------------------------------|-----------------------|-------|----|
|                                |                                                                |                        |                                                               | Type 300<br>S1<br>±0.020(0.5 mm) | Type 301<br>T<br>S2<br>±0.020(0.5 mm) |                       |       |    |
| Case Dimensions in Inches      |                                                                |                        |                                                               |                                  |                                       |                       |       |    |
| EG                             | .512 x 0.846                                                   | 0.906                  | 0.492 x 0.787                                                 | 0.197                            | 0.098                                 | 0.197                 | 0.032 | 20 |
| EK                             | .512 x 1.043                                                   | 1.142                  | 0.492 x 0.984                                                 | 0.197                            | 0.098                                 | 0.197                 | 0.032 | 20 |
| EM                             | .512 x 1.102                                                   | 1.161                  | 0.492 x 1.043                                                 | 0.197                            | 0.098                                 | 0.197                 | 0.032 | 20 |
| EN                             | .512 x 1.378                                                   | 1.417                  | 0.492 x 1.319                                                 | 0.197                            | 0.098                                 | 0.197                 | 0.032 | 20 |
| ER                             | .512 x 1.732                                                   | 1.791                  | 0.492 x 1.673                                                 | 0.197                            | 0.098                                 | 0.197                 | 0.032 | 20 |
| FK                             | .650 x 1.043                                                   | 1.098                  | 0.630 x 0.984                                                 | 0.295                            | 0.148                                 | 0.295                 | 0.032 | 20 |
| FF                             | .650 x 1.319                                                   | 1.417                  | 0.630 x 1.260                                                 | 0.295                            | 0.148                                 | 0.295                 | 0.032 | 20 |
| FQ                             | .650 x 1.476                                                   | 1.575                  | 0.630 x 1.417                                                 | 0.295                            | 0.148                                 | 0.295                 | 0.032 | 20 |
| FV                             | .650 x 1.634                                                   | 1.669                  | 0.630 x 1.575                                                 | 0.295                            | 0.148                                 | 0.295                 | 0.032 | 20 |
| LQ                             | .728 x 1.476                                                   | 1.575                  | 0.709 x 1.417                                                 | 0.295                            | 0.148                                 | 0.295                 | 0.032 | 20 |
| LV                             | .728 x 1.634                                                   | 1.693                  | 0.709 x 1.575                                                 | 0.295                            | 0.148                                 | 0.295                 | 0.032 | 20 |
| GE                             | .765 x 1.150                                                   | 1.212                  | 0.750 x 1.125                                                 | 0.200                            | 0.300                                 | 0.300                 | 0.040 | 18 |
| GJ                             | .765 x 1.650                                                   | 1.712                  | 0.750 x 1.625                                                 | 0.200                            | 0.300                                 | 0.300                 | 0.040 | 18 |
| GL                             | .765 x 2.150                                                   | 2.212                  | 0.750 x 2.125                                                 | 0.200                            | 0.300                                 | 0.300                 | 0.040 | 18 |
| GP                             | .765 x 2.650                                                   | 2.712                  | 0.750 x 2.625                                                 | 0.200                            | 0.300                                 | 0.300                 | 0.040 | 18 |
| GS                             | .765 x 3.150                                                   | 3.212                  | 0.750 x 3.125                                                 | 0.200                            | 0.300                                 | 0.300                 | 0.040 | 18 |
| GT                             | .765 x 3.650                                                   | 3.712                  | 0.750 x 3.625                                                 | 0.200                            | 0.300                                 | 0.300                 | 0.040 | 18 |
| HE                             | .890 x 1.150                                                   | 1.212                  | 0.875 x 1.125                                                 | 0.300                            | 0.400                                 | 0.300                 | 0.040 | 18 |
| HJ                             | .890 x 1.650                                                   | 1.712                  | 0.875 x 1.625                                                 | 0.300                            | 0.400                                 | 0.300                 | 0.040 | 18 |
| HL                             | .890 x 2.150                                                   | 2.212                  | 0.875 x 2.125                                                 | 0.300                            | 0.400                                 | 0.300                 | 0.040 | 18 |
| HP                             | .890 x 2.650                                                   | 2.712                  | 0.875 x 2.625                                                 | 0.300                            | 0.400                                 | 0.300                 | 0.040 | 18 |
| HS                             | .890 x 3.150                                                   | 3.212                  | 0.875 x 3.125                                                 | 0.300                            | 0.400                                 | 0.300                 | 0.040 | 18 |
| HT                             | .890 x 3.650                                                   | 3.712                  | 0.875 x 3.625                                                 | 0.300                            | 0.400                                 | 0.300                 | 0.040 | 18 |
| JE                             | 1.015 x 1.150                                                  | 1.212                  | 1.000 x 1.125                                                 | 0.300                            | 0.400                                 | 0.400                 | 0.040 | 18 |
| JJ                             | 1.015 x 1.650                                                  | 1.712                  | 1.000 x 1.625                                                 | 0.300                            | 0.400                                 | 0.400                 | 0.040 | 18 |
| JL                             | 1.015 x 2.150                                                  | 2.212                  | 1.000 x 2.125                                                 | 0.300                            | 0.400                                 | 0.400                 | 0.040 | 18 |
| JP                             | 1.015 x 2.650                                                  | 2.712                  | 1.000 x 2.625                                                 | 0.300                            | 0.400                                 | 0.400                 | 0.040 | 18 |
| JS                             | 1.015 x 3.150                                                  | 3.212                  | 1.000 x 3.125                                                 | 0.300                            | 0.400                                 | 0.400                 | 0.040 | 18 |
| JT                             | 1.015 x 3.650                                                  | 3.712                  | 1.000 x 3.625                                                 | 0.300                            | 0.400                                 | 0.400                 | 0.040 | 18 |
| Case Dimensions in Millimeters |                                                                |                        |                                                               |                                  |                                       |                       |       |    |
| EG                             | 13.0 x 21.5                                                    | 23                     | 12.5 x 20.0                                                   | 5.00                             | 2.50                                  | 5.00                  | 0.81  | 20 |
| EK                             | 13.0 x 26.5                                                    | 29.0                   | 12.5 x 25.0                                                   | 5.00                             | 2.50                                  | 5.00                  | 0.81  | 20 |
| EM                             | 13.0 x 28.0                                                    | 29.5                   | 12.5 x 26.5                                                   | 5.00                             | 2.50                                  | 5.00                  | 0.81  | 20 |
| EN                             | 13.0 x 35.0                                                    | 36.0                   | 12.5 x 33.5                                                   | 5.00                             | 2.50                                  | 5.00                  | 0.81  | 20 |
| ER                             | 13.0 x 44.0                                                    | 45.5                   | 12.5 x 42.5                                                   | 5.00                             | 2.50                                  | 5.00                  | 0.81  | 20 |
| FK                             | 16.5 x 26.5                                                    | 27.9                   | 16.0 x 25.0                                                   | 7.50                             | 3.75                                  | 7.50                  | 0.81  | 20 |
| FF                             | 16.5 x 33.5                                                    | 36.0                   | 16.0 x 32.0                                                   | 7.50                             | 3.75                                  | 7.50                  | 0.81  | 20 |
| FQ                             | 16.5 x 37.5                                                    | 40.0                   | 16.0 x 36.0                                                   | 7.50                             | 3.75                                  | 7.50                  | 0.81  | 20 |
| FV                             | 16.5 x 41.5                                                    | 42.4                   | 16.0 x 40.0                                                   | 7.50                             | 3.75                                  | 7.50                  | 0.81  | 20 |
| LQ                             | 18.5 x 37.5                                                    | 40.0                   | 18.0 x 36.0                                                   | 7.50                             | 3.75                                  | 7.50                  | 0.81  | 20 |
| LV                             | 18.5 x 41.5                                                    | 43.0                   | 18.0 x 40.0                                                   | 7.50                             | 3.75                                  | 7.50                  | 0.81  | 20 |
| GE                             | 19.4 x 29.2                                                    | 30.8                   | 19.1 x 28.6                                                   | 5.08                             | 7.62                                  | 7.62                  | 1.02  | 18 |
| GJ                             | 19.4 x 41.9                                                    | 43.5                   | 19.1 x 41.3                                                   | 5.08                             | 7.62                                  | 7.62                  | 1.02  | 18 |
| GL                             | 19.4 x 54.6                                                    | 56.2                   | 19.1 x 54.0                                                   | 5.08                             | 7.62                                  | 7.62                  | 1.02  | 18 |
| GP                             | 19.4 x 67.3                                                    | 68.9                   | 19.1 x 66.7                                                   | 5.08                             | 7.62                                  | 7.62                  | 1.02  | 18 |
| GS                             | 19.4 x 80.0                                                    | 81.6                   | 19.1 x 79.4                                                   | 5.08                             | 7.62                                  | 7.62                  | 1.02  | 18 |
| GT                             | 19.4 x 92.7                                                    | 94.3                   | 19.1 x 92.1                                                   | 5.08                             | 7.62                                  | 7.62                  | 1.02  | 18 |
| HE                             | 22.6 x 29.2                                                    | 30.8                   | 22.2 x 28.6                                                   | 7.62                             | 10.16                                 | 7.62                  | 1.02  | 18 |
| HJ                             | 22.6 x 41.9                                                    | 43.5                   | 22.2 x 41.3                                                   | 7.62                             | 10.16                                 | 7.62                  | 1.02  | 18 |
| HL                             | 22.6 x 54.6                                                    | 56.2                   | 22.2 x 54.0                                                   | 7.62                             | 10.16                                 | 7.62                  | 1.02  | 18 |
| HP                             | 22.6 x 67.3                                                    | 68.9                   | 22.2 x 66.7                                                   | 7.62                             | 10.16                                 | 7.62                  | 1.02  | 18 |
| HS                             | 22.6 x 80.0                                                    | 81.6                   | 22.2 x 79.4                                                   | 7.62                             | 10.16                                 | 7.62                  | 1.02  | 18 |
| HT                             | 22.6 x 92.7                                                    | 94.3                   | 22.2 x 92.1                                                   | 7.62                             | 10.16                                 | 7.62                  | 1.02  | 18 |
| JE                             | 25.8 x 29.2                                                    | 30.8                   | 25.4 x 28.6                                                   | 7.62                             | 10.16                                 | 10.16                 | 1.02  | 18 |
| JJ                             | 25.8 x 41.9                                                    | 43.5                   | 25.4 x 41.3                                                   | 7.62                             | 10.16                                 | 10.16                 | 1.02  | 18 |
| HL                             | 25.8 x 54.6                                                    | 56.2                   | 25.4 x 54.0                                                   | 7.62                             | 10.16                                 | 10.16                 | 1.02  | 18 |
| JP                             | 25.8 x 67.3                                                    | 68.9                   | 25.4 x 66.7                                                   | 7.62                             | 10.16                                 | 10.16                 | 1.02  | 18 |
| JS                             | 25.8 x 80.0                                                    | 81.6                   | 25.4 x 79.4                                                   | 7.62                             | 10.16                                 | 10.16                 | 1.02  | 18 |
| JT                             | 25.8 x 92.7                                                    | 94.3                   | 25.4 x 92.1                                                   | 7.62                             | 10.16                                 | 10.16                 | 1.02  | 18 |

# Type 300/301 –55 °C to 105 °C Long-Life, Switching Power Grade Radial

## High Capacitance and Ultra-Low ESR Ratings

|                       |                | ESR MAX       |               | Ripple MAX    |               | Nom Size    |
|-----------------------|----------------|---------------|---------------|---------------|---------------|-------------|
|                       |                | @ 25°C        |               | @ 85°C        |               | Insulated   |
| Cap.<br>(µF)          | Catalog        | 120 Hz 20 kHz | 120 Hz 20 kHz | 120 Hz 20 kHz | 120 Hz 20 kHz | D x L       |
|                       | Part Number    | (mΩ)          |               | (A)           |               | (in)        |
| 6.3 Vdc (9 Vdc Surge) |                |               |               |               |               |             |
| 680                   | 301681U6R3EM2  | 231.0         | 150.0         | 1.16          | 1.44          | .51 x 1.10  |
| 1000                  | 301102U6R3FK2  | 160.0         | 90.0          | 1.54          | 2.05          | .65 x 1.04  |
| 1200                  | 301122U6R3ER2  | 134.0         | 70.0          | 1.78          | 2.46          | .51 x 1.73  |
| 1500                  | 301R152M6R3EG2 | 201.0         | 71.0          | 1.09          | 1.84          | .51 x .85   |
| 1500                  | 301152U6R3FN2  | 105.0         | 50.0          | 2.00          | 2.90          | .65 x 1.32  |
| 2200                  | 301R222M6R3EM2 | 110.0         | 60.0          | 1.20          | 1.63          | .51 x 1.10  |
| 2700                  | 301272U6R3GE2  | 143.0         | 81.5          | 1.71          | 2.13          | .77 x 1.15  |
| 2700                  | 301R272U6R3GE2 | 124.0         | 70.6          | 1.84          | 2.29          | .77 x 1.15  |
| 3300                  | 301R332M6R3EN2 | 93.0          | 57.0          | 1.78          | 2.28          | .51 x 1.38  |
| 3300                  | 301332U6R3LV2  | 76.0          | 45.0          | 2.61          | 3.39          | .73 x 1.63  |
| 3900                  | 301R392M6R3FK2 | 111.0         | 41.0          | 1.84          | 3.03          | .65 x 1.04  |
| 3900                  | 301392U6R3HE2  | 100.0         | 61.1          | 2.24          | 2.71          | .895 x 1.15 |
| 3900                  | 301R392U6R3HE2 | 86.8          | 50.3          | 2.41          | 2.98          | .895 x 1.15 |
| 4700                  | 301R472M6R3ER2 | 68.0          | 31.0          | 2.52          | 3.73          | .51 x 1.73  |
| 4700                  | 301472U6R3GJ2  | 72.5          | 41.3          | 2.65          | 3.30          | .77 x 1.65  |
| 4700                  | 301R472U6R3GJ2 | 62.8          | 35.8          | 2.84          | 3.55          | .77 x 1.65  |
| 5600                  | 301R562M6R3FF2 | 78.0          | 37.0          | 2.43          | 3.53          | .65 x 1.32  |
| 5600                  | 301562U6R3JE2  | 83.8          | 57.0          | 2.56          | 2.92          | 1.02 x 1.15 |
| 5600                  | 301R562U6R3JE2 | 72.7          | 41.4          | 2.75          | 3.43          | 1.02 x 1.15 |
| 6800                  | 301R682M6R3FQ2 | 71.0          | 34.0          | 2.53          | 3.65          | .65 x 1.48  |
| 8200                  | 301R822M6R3FV2 | 59.0          | 31.0          | 3.03          | 4.18          | .65 x 1.65  |
| 8200                  | 301R822M6R3LQ2 | 67.0          | 29.0          | 2.97          | 4.51          | .73 x 1.48  |
| 8200                  | 301822U6R3GL2  | 49.2          | 28.1          | 4.02          | 5.02          | .77 x 2.15  |
| 8200                  | 301R822U6R3GL2 | 42.7          | 24.3          | 4.32          | 5.40          | .77 x 2.15  |
| 8200                  | 301822U6R3HJ2  | 51.1          | 31.2          | 3.71          | 4.48          | .895 x 1.65 |
| 8200                  | 301R822U6R3HJ2 | 44.3          | 25.7          | 3.99          | 4.93          | .895 x 1.65 |
| 10000                 | 301R103M6R3LV2 | 54.0          | 24.0          | 3.47          | 5.21          | .73 x 1.63  |
| 10000                 | 301103U6R3GP2  | 37.8          | 21.5          | 5.12          | 6.39          | .77 x 2.65  |
| 10000                 | 301R103U6R3GP2 | 32.7          | 18.7          | 5.50          | 6.86          | .77 x 2.65  |
| 12000                 | 301123U6R3GS2  | 31.0          | 17.7          | 6.17          | 7.70          | .77 x 3.15  |
| 12000                 | 301R123U6R3GS2 | 26.8          | 15.3          | 6.62          | 8.27          | .77 x 3.15  |
| 12000                 | 301123U6R3HL2  | 35.0          | 21.3          | 5.20          | 6.27          | .895 x 2.15 |
| 12000                 | 301R123U6R3HL2 | 25.5          | 14.8          | 6.09          | 7.54          | .895 x 2.15 |
| 12000                 | 301123U6R3JJ2  | 43.0          | 29.2          | 4.39          | 5.02          | 1.02 x 1.65 |
| 12000                 | 301R123U6R3JJ2 | 37.2          | 21.2          | 4.72          | 5.89          | 1.02 x 1.65 |
| 15000                 | 301153U6R3GT2  | 26.6          | 15.1          | 7.10          | 8.86          | .77 x 3.65  |
| 15000                 | 301R153U6R3GT2 | 23.0          | 13.1          | 7.62          | 9.52          | .77 x 3.65  |
| 15000                 | 301153U6R3HP2  | 27.1          | 16.5          | 6.57          | 7.93          | .895 x 2.65 |
| 15000                 | 301R153U6R3HP2 | 19.5          | 11.3          | 7.75          | 9.60          | .895 x 2.65 |
| 18000                 | 301183U6R3JL2  | 29.6          | 20.1          | 6.08          | 6.95          | 1.02 x 2.15 |
| 18000                 | 301R183U6R3JL2 | 19.1          | 10.9          | 7.57          | 9.45          | 1.02 x 2.15 |
| 22000                 | 301223U6R3HS2  | 22.4          | 13.7          | 7.88          | 9.51          | .895 x 3.15 |
| 22000                 | 301R223U6R3HS2 | 15.9          | 9.2           | 9.35          | 11.60         | .895 x 3.15 |

| Cap.<br>(µF)                  | Catalog<br>Part Number | ESR MAX<br>@ 25°C |      | Ripple MAX<br>@ 85°C |       | Nom Size<br>Insulated |  |
|-------------------------------|------------------------|-------------------|------|----------------------|-------|-----------------------|--|
|                               |                        | 120 Hz 20 kHz     |      | 120 Hz 20 kHz        |       | D x L                 |  |
|                               |                        | (mΩ)              |      | (A)                  |       | (in)                  |  |
| 22000                         | 301223U6R3JP2          | 23.0              | 15.6 | 7.66                 | 8.75  | 1.02 x 2.65           |  |
| 22000                         | 301R223U6R3JP2         | 14.7              | 8.4  | 9.59                 | 12.00 | 1.02 x 2.65           |  |
| 27000                         | 301273U6R3HT2          | 19.4              | 11.9 | 9.04                 | 10.90 | .895 x 3.65           |  |
| 27000                         | 301R273U6R3HT2         | 13.6              | 7.9  | 10.80                | 13.40 | .895 x 3.65           |  |
| 27000                         | 301273U6R3JS2          | 19.2              | 13.0 | 9.11                 | 10.40 | 1.02 x 3.15           |  |
| 27000                         | 301R273U6R3JS2         | 15.1              | 8.6  | 10.30                | 12.80 | 1.02 x 3.15           |  |
| 33000                         | 301333U6R3JT2          | 16.7              | 11.4 | 10.50                | 12.00 | 1.02 x 3.65           |  |
| 33000                         | 301R333U6R3JT2         | 10.4              | 5.9  | 13.30                | 16.60 | 1.02 x 3.65           |  |
| <b>7.5 Vdc (10 Vdc Surge)</b> |                        |                   |      |                      |       |                       |  |
| 2200                          | 301222U7R5GE2          | 147.0             | 80.8 | 1.69                 | 2.14  | .77 x 1.15            |  |
| 2200                          | 301R222U7R5GE2         | 127.0             | 70.0 | 1.81                 | 2.30  | .77 x 1.15            |  |
| 3900                          | 301392U7R5HE2          | 103.0             | 61.6 | 2.21                 | 2.69  | .895 x 1.15           |  |
| 3900                          | 301R392U7R5HE2         | 88.9              | 48.9 | 2.38                 | 3.02  | .895 x 1.15           |  |
| 4700                          | 301472U7R5GJ2          | 74.5              | 41.0 | 2.61                 | 3.32  | .77 x 1.65            |  |
| 4700                          | 301R472U7R5GJ2         | 64.5              | 35.5 | 2.80                 | 3.56  | .77 x 1.65            |  |
| 5600                          | 301562U7R5JE2          | 85.5              | 56.5 | 2.53                 | 2.94  | 1.02 x 1.15           |  |
| 5600                          | 301R562U7R5JE2         | 74.1              | 41.5 | 2.72                 | 3.42  | 1.02 x 1.15           |  |
| 6800                          | 301682U7R5GL2          | 50.6              | 27.8 | 3.97                 | 5.05  | .77 x 2.15            |  |
| 6800                          | 301R682U7R5GL2         | 43.8              | 24.1 | 4.26                 | 5.42  | .77 x 2.15            |  |
| 6800                          | 301682U7R5HJ2          | 52.4              | 31.4 | 3.67                 | 4.46  | .895 x 1.65           |  |
| 6800                          | 301R682U7R5HJ2         | 45.4              | 25.0 | 3.94                 | 5.01  | .895 x 1.65           |  |
| 8200                          | 301822U7R5GP2          | 38.7              | 21.3 | 5.05                 | 6.42  | .77 x 2.65            |  |
| 8200                          | 301R822U7R5GP2         | 33.6              | 18.5 | 5.43                 | 6.90  | .77 x 2.65            |  |
| 10000                         | 301103U7R5HL2          | 35.8              | 21.5 | 5.14                 | 6.25  | .895 x 2.15           |  |
| 10000                         | 301R103U7R5HL2         | 26.2              | 14.4 | 6.01                 | 7.64  | .895 x 2.15           |  |
| 10000                         | 301103U7R5JJ2          | 43.8              | 28.9 | 4.35                 | 5.05  | 1.02 x 1.65           |  |
| 10000                         | 301R103U7R5JJ2         | 38.0              | 21.3 | 4.67                 | 5.89  | 1.02 x 1.65           |  |
| 12000                         | 301123U7R5GS2          | 31.8              | 17.5 | 6.09                 | 7.74  | .77 x 3.15            |  |
| 12000                         | 301R123U7R5GS2         | 27.5              | 15.1 | 6.54                 | 8.31  | .77 x 3.15            |  |
| 12000                         | 301123U7R5GT2          | 27.2              | 15.0 | 7.01                 | 8.91  | .77 x 3.65            |  |
| 12000                         | 301R123U7R5GT2         | 23.6              | 13.0 | 7.53                 | 9.57  | .77 x 3.65            |  |
| 15000                         | 301153U7R5HP2          | 27.7              | 16.6 | 6.50                 | 7.91  | .895 x 2.65           |  |
| 15000                         | 301R153U7R5HP2         | 20.0              | 11.0 | 7.65                 | 9.73  | .895 x 2.65           |  |
| 15000                         | 301153U7R5JL2          | 30.1              | 19.9 | 6.02                 | 6.99  | 1.02 x 2.15           |  |
| 15000                         | 301R153U7R5JL2         | 19.6              | 10.9 | 7.47                 | 9.41  | 1.02 x 2.15           |  |
| 18000                         | 301183U7R5HS2          | 22.9              | 13.8 | 7.79                 | 9.48  | .895 x 3.15           |  |
| 18000                         | 301R183U7R5HS2         | 16.3              | 9.0  | 9.23                 | 11.70 | .895 x 3.15           |  |
| 22000                         | 301223U7R5HT2          | 19.8              | 11.9 | 8.95                 | 10.90 | .895 x 3.65           |  |
| 22000                         | 301R223U7R5HT2         | 13.9              | 7.7  | 10.70                | 13.60 | .895 x 3.65           |  |
| 22000                         | 301223U7R5JP2          | 23.4              | 15.5 | 7.59                 | 8.80  | 1.02 x 2.65           |  |
| 22000                         | 301R223U7R5JP2         | 15.0              | 8.4  | 9.47                 | 11.90 | 1.02 x 2.65           |  |
| 27000                         | 301273U7R5JS2          | 19.5              | 12.9 | 9.03                 | 10.50 | 1.02 x 3.15           |  |
| 27000                         | 301R273U7R5JS2         | 15.5              | 8.7  | 10.10                | 12.80 | 1.02 x 3.15           |  |
| 33000                         | 301333U7R5JT2          | 17.0              | 11.2 | 10.40                | 12.10 | 1.02 x 3.65           |  |

# Type 300/301 –55 °C to 105 °C Long-Life, Switching Power Grade Radial

## High Capacitance and Ultra-Low ESR

| Cap.<br>(µF)           | Catalog<br>Part Number | ESR MAX               |                      | Ripple MAX    |       | Nom Size    |
|------------------------|------------------------|-----------------------|----------------------|---------------|-------|-------------|
|                        |                        | @ 25°C                |                      | @ 85°C        |       | Insulated   |
|                        |                        | 120 Hz 20 kHz<br>(mΩ) | 120 Hz 20 kHz<br>(A) | D x L<br>(in) |       |             |
| 7.5 Vdc (10 Vdc Surge) |                        |                       |                      |               |       |             |
| 33000                  | 301R333U7R5JT2         | 10.6                  | 5.9                  | 13.10         | 16.60 | 1.02 x 3.65 |
| 10 Vdc (15 Vdc Surge)  |                        |                       |                      |               |       |             |
| 1000                   | 301R102M010EG2         | 216.0                 | 77.0                 | 1.07          | 1.80  | .51 x .85   |
| 1500                   | 301R152M010EK2         | 200.0                 | 64.0                 | 1.07          | 1.90  | .51 x 1.04  |
| 1800                   | 301R182M010EM2         | 122.0                 | 62.0                 | 1.58          | 2.21  | .51 x 1.10  |
| 1800                   | 301182U010GE2          | 153.0                 | 81.2                 | 1.65          | 2.14  | .77 x 1.15  |
| 1800                   | 301R182U010GE2         | 133.0                 | 70.3                 | 1.77          | 2.30  | .77 x 1.15  |
| 2700                   | 301R272M010EN2         | 111.0                 | 59.0                 | 1.66          | 2.28  | .51 x 1.38  |
| 2700                   | 301R272M010FK2         | 116.0                 | 42.0                 | 2.04          | 3.39  | .65 x 1.04  |
| 3300                   | 301R332M010ER2         | 75.0                  | 32.0                 | 2.41          | 3.69  | .51 x 1.73  |
| 3300                   | 301R332U010HE2         | 106.0                 | 61.8                 | 2.17          | 2.69  | .895 x 1.15 |
| 3300                   | 301332U010HE2          | 92.3                  | 50.8                 | 2.33          | 2.97  | .895 x 1.15 |
| 3900                   | 301392U010GJ2          | 77.6                  | 41.1                 | 2.56          | 3.31  | .77 x 1.65  |
| 3900                   | 301R392U010GJ2         | 67.3                  | 35.7                 | 2.75          | 3.56  | .77 x 1.65  |
| 4700                   | 301R472M010FF2         | 87.0                  | 38.0                 | 2.29          | 3.47  | .65 x 1.32  |
| 4700                   | 301472U010JE2          | 88.3                  | 56.5                 | 2.49          | 2.94  | 1.02 x 1.15 |
| 4700                   | 301R472U010JE2         | 76.5                  | 42.8                 | 2.68          | 3.37  | 1.02 x 1.15 |
| 5600                   | 301R562M010FQ2         | 78.0                  | 33.0                 | 2.35          | 3.62  | .65 x 1.48  |
| 5600                   | 301562U010GL2          | 52.7                  | 27.9                 | 3.89          | 5.04  | .77 x 2.15  |
| 5600                   | 301R562U010GL2         | 45.6                  | 24.2                 | 4.18          | 5.41  | .77 x 2.15  |
| 6800                   | 301R682M010LQ2         | 71.0                  | 31.0                 | 2.92          | 4.42  | .73 x 1.48  |
| 6800                   | 301682U010HJ2          | 54.3                  | 31.5                 | 3.60          | 4.46  | .895 x 1.65 |
| 6800                   | 301R682U010HJ2         | 47.1                  | 25.9                 | 3.87          | 4.92  | .895 x 1.65 |
| 8200                   | 301R882M010LV2         | 60.0                  | 26.0                 | 3.30          | 5.01  | .73 x 1.63  |
| 8200                   | 301822U010GP2          | 40.3                  | 21.4                 | 4.95          | 6.41  | .77 x 2.65  |
| 8200                   | 301R822U010GP2         | 34.9                  | 18.5                 | 5.32          | 6.89  | .77 x 2.65  |
| 8200                   | 301822U010JJ2          | 45.2                  | 28.9                 | 4.28          | 5.05  | 1.02 x 1.65 |
| 8200                   | 301R822U010JJ2         | 39.2                  | 21.9                 | 4.60          | 5.80  | 1.02 x 1.65 |
| 10000                  | 301103U010GS2          | 33.0                  | 17.5                 | 5.97          | 7.73  | .77 x 3.15  |
| 10000                  | 301R103U010GS2         | 28.6                  | 15.2                 | 6.41          | 8.31  | .77 x 3.15  |
| 10000                  | 301103U010HL2          | 37.1                  | 21.5                 | 5.05          | 6.25  | .895 x 2.15 |
| 10000                  | 301R103U010HL2         | 27.3                  | 15.0                 | 5.88          | 7.48  | .895 x 2.15 |
| 12000                  | 301123U010GT2          | 28.3                  | 15.0                 | 6.88          | 8.91  | .77 x 3.65  |
| 12000                  | 301R123U010GT2         | 24.5                  | 13.0                 | 7.39          | 9.57  | .77 x 3.65  |
| 12000                  | 301123U010HP2          | 28.7                  | 16.6                 | 6.39          | 7.91  | .895 x 2.65 |
| 12000                  | 301R123U010HP2         | 20.8                  | 11.5                 | 7.49          | 9.53  | .895 x 2.65 |
| 12000                  | 301123U010JL2          | 31.0                  | 19.9                 | 5.93          | 6.99  | 1.02 x 2.15 |
| 12000                  | 301R123U010JL2         | 20.3                  | 11.4                 | 7.33          | 9.23  | 1.02 x 2.15 |
| 15000                  | 301153U010HS2          | 23.7                  | 13.7                 | 7.66          | 9.49  | .895 x 3.15 |
| 15000                  | 301R153U010HS2         | 17.0                  | 9.3                  | 9.05          | 11.50 | .895 x 3.15 |
| 18000                  | 301183U010HT2          | 20.5                  | 11.9                 | 8.81          | 10.90 | .895 x 3.65 |
| 18000                  | 301R183U010HT2         | 14.5                  | 8.0                  | 10.50         | 13.30 | .895 x 3.65 |
| 18000                  | 301183U010JP2          | 24.1                  | 15.4                 | 7.48          | 8.81  | 1.02 x 2.65 |

|                       |                        | ESR MAX               |      | Ripple MAX           |       | Nom Size      |
|-----------------------|------------------------|-----------------------|------|----------------------|-------|---------------|
|                       |                        | @ 25°C                |      | @ 85°C               |       | Insulated     |
| Cap.<br>(µF)          | Catalog<br>Part Number | 120 Hz 20 kHz<br>(mΩ) |      | 120 Hz 20 kHz<br>(A) |       | D x L<br>(in) |
| 18000                 | 301R183U010JP2         | 15.6                  | 8.7  | 9.29                 | 11.70 | 1.02 x 2.65   |
| 22000                 | 301223U010JS2          | 20.1                  | 12.8 | 8.90                 | 10.50 | 1.02 x 3.15   |
| 22000                 | 301R223U010JS2         | 16.1                  | 9.0  | 9.94                 | 12.50 | 1.02 x 3.15   |
| 27000                 | 301273U010JT2          | 17.5                  | 11.2 | 10.30                | 12.10 | 1.02 x 3.65   |
| 27000                 | 301R273U010JT2         | 11.0                  | 6.2  | 12.90                | 16.30 | 1.02 x 3.65   |
| 16 Vdc (25 Vdc Surge) |                        |                       |      |                      |       |               |
| 820                   | 301R821M016EG2         | 216.0                 | 85.0 | 1.12                 | 1.78  | .51 x .85     |
| 1200                  | 301R122M016EM2         | 130.0                 | 66.0 | 1.60                 | 2.24  | .51 x 1.10    |
| 1500                  | 301152U016GE2          | 159.0                 | 80.9 | 1.62                 | 2.14  | .77 x 1.15    |
| 1500                  | 301R152U016GE2         | 138.0                 | 70.1 | 1.74                 | 2.30  | .77 x 1.15    |
| 1800                  | 301R182M016EN2         | 122.0                 | 55.0 | 1.85                 | 2.76  | .51 x 1.38    |
| 2200                  | 301R222M016FK2         | 120.0                 | 42.0 | 1.79                 | 3.02  | .65 x 1.04    |
| 2700                  | 301R272M016ER2         | 82.0                  | 32.0 | 1.66                 | 2.65  | .51 x 1.73    |
| 2700                  | 301272U016HE2          | 110.0                 | 63.7 | 2.14                 | 2.65  | .895 x 1.15   |
| 2700                  | 301R272U016HE2         | 95.2                  | 52.4 | 2.30                 | 2.92  | .895 x 1.15   |
| 3300                  | 301R332M016FF2         | 78.0                  | 32.0 | 2.42                 | 3.78  | .65 x 1.32    |
| 3300                  | 301332U016GJ2          | 80.4                  | 41.0 | 2.51                 | 3.32  | .77 x 1.65    |
| 3300                  | 301R332U016GJ2         | 69.7                  | 35.5 | 2.70                 | 3.56  | .77 x 1.65    |
| 3300                  | 301332U016JE2          | 90.7                  | 56.2 | 2.46                 | 2.94  | 1.02 x 1.15   |
| 3300                  | 301R332U016JE2         | 78.6                  | 41.6 | 2.64                 | 3.42  | 1.02 x 1.15   |
| 3900                  | 301R392M016FQ2         | 75.0                  | 32.0 | 2.59                 | 3.97  | .65 x 1.48    |
| 4700                  | 301R472M016LQ2         | 74.0                  | 32.0 | 2.85                 | 4.34  | .73 x 1.48    |
| 4700                  | 301472U016GL2          | 54.5                  | 27.8 | 3.82                 | 5.05  | .77 x 2.15    |
| 4700                  | 301R472U016GL2         | 47.2                  | 24.1 | 4.11                 | 5.42  | .77 x 2.15    |
| 4700                  | 301472U016HJ2          | 56.0                  | 32.5 | 3.55                 | 4.39  | .895 x 1.65   |
| 4700                  | 301R472U016HJ2         | 48.5                  | 26.7 | 3.81                 | 4.84  | .895 x 1.65   |
| 5600                  | 301R562M016LV2         | 62.0                  | 26.0 | 3.22                 | 4.98  | .73 x 1.63    |
| 5600                  | 301562U016GP2          | 41.7                  | 21.3 | 4.87                 | 6.43  | .77 x 2.65    |
| 5600                  | 301R562U016GP2         | 36.1                  | 18.4 | 5.23                 | 6.90  | .77 x 2.65    |
| 6800                  | 301682U016HL2          | 38.2                  | 22.2 | 4.97                 | 6.15  | .895 x 2.15   |
| 6800                  | 301R682U016HL2         | 28.3                  | 15.6 | 5.78                 | 7.35  | .895 x 2.15   |
| 6800                  | 301682U016JJ2          | 46.4                  | 28.8 | 4.23                 | 5.06  | 1.02 x 1.65   |
| 6800                  | 301R682U016JJ2         | 40.2                  | 21.3 | 4.54                 | 5.88  | 1.02 x 1.65   |
| 8200                  | 301822U016GS2          | 34.1                  | 17.4 | 5.87                 | 7.75  | .77 x 3.15    |
| 8200                  | 301R822U016GS2         | 29.6                  | 15.1 | 6.31                 | 8.33  | .77 x 3.15    |
| 10000                 | 301103U016GT2          | 29.2                  | 14.9 | 6.77                 | 8.94  | .77 x 3.65    |
| 10000                 | 301R103U016GT2         | 25.3                  | 12.9 | 7.27                 | 9.60  | .77 x 3.65    |
| 10000                 | 301103U016HP2          | 29.5                  | 17.1 | 6.30                 | 7.79  | .895 x 2.65   |
| 10000                 | 301R103U016HP2         | 21.6                  | 11.9 | 7.36                 | 9.36  | .895 x 2.65   |
| 10000                 | 301103U016JL2          | 31.8                  | 19.7 | 5.86                 | 7.01  | 1.02 x 2.15   |
| 10000                 | 301R103U016JL2         | 21.0                  | 11.1 | 7.21                 | 9.33  | 1.02 x 2.15   |
| 12000                 | 301123U016HS2          | 24.4                  | 14.1 | 7.55                 | 9.35  | .895 x 3.15   |
| 12000                 | 301R123U016HS2         | 17.6                  | 9.7  | 8.89                 | 11.30 | .895 x 3.15   |
| 15000                 | 301153U016HT2          | 21.1                  | 12.2 | 8.69                 | 10.80 | .895 x 3.65   |

# Type 300/301 –55 °C to 105 °C Long-Life, Switching Power Grade Radial

## High Capacitance and Ultra-Low ESR

| Cap.<br>(µF)          | Catalog<br>Part Number | ESR MAX               |       | Ripple MAX           |       | Nom Size      |
|-----------------------|------------------------|-----------------------|-------|----------------------|-------|---------------|
|                       |                        | @ 25°C                |       | @ 85°C               |       | Insulated     |
|                       |                        | 120 Hz 20 kHz<br>(mΩ) |       | 120 Hz 20 kHz<br>(A) |       | D x L<br>(in) |
| 16 Vdc (25 Vdc Surge) |                        |                       |       |                      |       |               |
| 15000                 | 301R153U016HT2         | 15.0                  | 8.2   | 10.30                | 13.10 | .895 x 3.65   |
| 15000                 | 301153U016JP2          | 24.7                  | 15.3  | 7.39                 | 8.85  | 1.02 x 2.65   |
| 15000                 | 301R153U016JP2         | 16.1                  | 8.5   | 9.14                 | 11.80 | 1.02 x 2.65   |
| 18000                 | 301183U016JS2          | 20.5                  | 12.7  | 8.80                 | 10.50 | 1.02 x 3.15   |
| 18000                 | 301R183U016JS2         | 16.6                  | 8.8   | 9.79                 | 12.70 | 1.02 x 3.15   |
| 22000                 | 301223U016JT2          | 17.9                  | 11.1  | 10.10                | 12.10 | 1.02 x 3.65   |
| 22000                 | 301R223U016JT2         | 11.4                  | 6.0   | 12.70                | 16.50 | 1.02 x 3.65   |
| 20 Vdc (30 Vdc Surge) |                        |                       |       |                      |       |               |
| 330                   | 301331U020EM2          | 360.0                 | 160.0 | 0.89                 | 1.34  | .51 x 1.10    |
| 470                   | 301R471M020EG2         | 250.0                 | 77.0  | 0.55                 | 0.99  | .51 x .85     |
| 470                   | 301471U020FK2          | 240.0                 | 90.0  | 1.22                 | 2.00  | .65 x 1.04    |
| 560                   | 301561U020ER2          | 220.0                 | 80.0  | 1.41                 | 2.34  | .51 x 1.73    |
| 680                   | 301R681M020EM2         | 140.0                 | 67.0  | 1.46                 | 2.11  | .51 x 1.10    |
| 680                   | 301681U020FF2          | 170.0                 | 60.0  | 1.72                 | 2.90  | .65 x 1.32    |
| 1000                  | 301R102M020EN2         | 114.0                 | 48.0  | 1.10                 | 1.69  | .51 x 1.38    |
| 1200                  | 301122U020GE2          | 159.0                 | 80.9  | 1.62                 | 2.14  | .77 x 1.15    |
| 1200                  | 301R122U020GE2         | 138.0                 | 70.1  | 1.74                 | 2.30  | .77 x 1.15    |
| 1500                  | 301R152M020ER2         | 85.0                  | 33.0  | 2.23                 | 3.58  | .51 x 1.73    |
| 1500                  | 301152U020LV2          | 90.0                  | 50.0  | 2.42                 | 3.25  | .73 x 1.63    |
| 2200                  | 301R222M020FQ2         | 77.0                  | 32.0  | 2.55                 | 3.96  | .65 x 1.48    |
| 2200                  | 301222U020HE2          | 110.0                 | 61.5  | 2.14                 | 2.70  | .895 x 1.15   |
| 2200                  | 301R222U020HE2         | 95.2                  | 53.3  | 2.30                 | 2.90  | .895 x 1.15   |
| 2700                  | 301272U020GJ2          | 80.4                  | 41.0  | 2.51                 | 3.32  | .77 x 1.65    |
| 2700                  | 301R272U020GJ2         | 69.7                  | 35.5  | 2.70                 | 3.56  | .77 x 1.65    |
| 2700                  | 301272U020JE2          | 90.7                  | 57.1  | 2.46                 | 2.92  | 1.02 x 1.15   |
| 2700                  | 301R272U020JE2         | 78.6                  | 49.5  | 2.64                 | 3.14  | 1.02 x 1.15   |
| 3300                  | 301R332M020LV2         | 62.0                  | 26.0  | 3.19                 | 4.92  | .73 x 1.63    |
| 3900                  | 301392U020GL2          | 54.5                  | 27.8  | 3.82                 | 5.05  | .77 x 2.15    |
| 3900                  | 301R392U020GL2         | 47.2                  | 24.1  | 4.11                 | 5.42  | .77 x 2.15    |
| 3900                  | 301392U020HJ2          | 56.0                  | 31.4  | 3.55                 | 4.47  | .895 x 1.65   |
| 3900                  | 301R392U020HJ2         | 48.5                  | 27.2  | 3.81                 | 4.80  | .895 x 1.65   |
| 4700                  | 301472U020GP2          | 41.7                  | 21.3  | 4.87                 | 6.43  | .77 x 2.65    |
| 4700                  | 301R472U020GP2         | 36.1                  | 18.4  | 5.23                 | 6.90  | .77 x 2.65    |
| 5600                  | 301562U020JJ2          | 46.4                  | 29.2  | 4.23                 | 5.02  | 1.02 x 1.65   |
| 5600                  | 301R562U020JJ2         | 40.2                  | 21.3  | 4.54                 | 5.88  | 1.02 x 1.65   |
| 6800                  | 301682U020GS2          | 34.1                  | 17.4  | 5.87                 | 7.75  | .77 x 3.15    |
| 6800                  | 301R682U020GS2         | 29.6                  | 15.1  | 6.31                 | 8.33  | .77 x 3.15    |
| 6800                  | 301682U020HL2          | 38.2                  | 21.4  | 4.97                 | 6.26  | .895 x 2.15   |
| 6800                  | 301R682U020HL2         | 28.3                  | 15.8  | 5.78                 | 7.28  | .895 x 2.15   |
| 8200                  | 301822U020GT2          | 29.2                  | 14.9  | 6.77                 | 8.94  | .77 x 3.65    |
| 8200                  | 301R822U020GT2         | 25.3                  | 12.9  | 7.27                 | 9.60  | .77 x 3.65    |
| 8200                  | 301822U020HP2          | 29.5                  | 16.5  | 6.30                 | 7.93  | .895 x 2.65   |
| 8200                  | 301R822U020HP2         | 21.6                  | 12.1  | 7.36                 | 9.28  | .895 x 2.65   |

|                       |                | ESR MAX       |       | Ripple MAX    |       | Nom Size    |
|-----------------------|----------------|---------------|-------|---------------|-------|-------------|
|                       |                | @ 25°C        |       | @ 85°C        |       | Insulated   |
| Cap.<br>(µF)          | Catalog        | 120 Hz 20 kHz |       | 120 Hz 20 kHz |       | D x L       |
|                       | Part Number    | (mΩ)          |       | (A)           |       | (in)        |
| 8200                  | 301822U020JL2  | 31.8          | 20.1  | 5.86          | 6.96  | 1.02 x 2.15 |
| 8200                  | 301R822U020JL2 | 21.0          | 11.1  | 7.21          | 9.33  | 1.02 x 2.15 |
| 10000                 | 301103U020HS2  | 24.4          | 13.7  | 7.55          | 9.52  | .895 x 3.15 |
| 10000                 | 301R103U020HS2 | 17.6          | 9.8   | 8.89          | 11.20 | .895 x 3.15 |
| 12000                 | 301123U020HT2  | 21.1          | 11.8  | 8.69          | 10.90 | .895 x 3.65 |
| 12000                 | 301R123U020HT2 | 15.0          | 8.4   | 10.30         | 13.00 | .895 x 3.65 |
| 12000                 | 301123U020JP2  | 24.7          | 15.6  | 7.39          | 8.77  | 1.02 x 2.65 |
| 12000                 | 301R123U020JP2 | 16.1          | 8.5   | 9.14          | 11.80 | 1.02 x 2.65 |
| 15000                 | 301153U020JS2  | 20.5          | 12.9  | 8.80          | 10.50 | 1.02 x 3.15 |
| 15000                 | 301R153U020JS2 | 13.2          | 7.0   | 11.00         | 14.20 | 1.02 x 3.15 |
| 18000                 | 301183U020JT2  | 17.9          | 11.2  | 10.10         | 12.00 | 1.02 x 3.65 |
| 18000                 | 301R183U020JT2 | 11.4          | 6.0   | 12.70         | 16.50 | 1.02 x 3.65 |
| 25 Vdc (35 Vdc Surge) |                |               |       |               |       |             |
| 330                   | 301331U025EN2  | 290.0         | 120.0 | 1.13          | 1.75  | .51 x 1.38  |
| 390                   | 301R391M025EG2 | 267.0         | 92.0  | 0.89          | 1.52  | .51 x .85   |
| 470                   | 301471U025ER2  | 220.0         | 80.0  | 1.42          | 2.35  | .51 x 1.73  |
| 560                   | 301R561M025EK2 | 193.0         | 75.0  | 1.12          | 1.79  | .51 x 1.04  |
| 680                   | 301R681M025EM2 | 160.0         | 67.0  | 1.40          | 2.17  | .51 x 1.10  |
| 680                   | 301681U025FQ2  | 190.0         | 75.0  | 1.53          | 2.44  | .65 x 1.48  |
| 1000                  | 301R102M025EN2 | 152.0         | 56.0  | 1.62          | 2.67  | .51 x 1.38  |
| 1000                  | 301102U025GE2  | 170.0         | 81.8  | 1.57          | 2.13  | .77 x 1.15  |
| 1000                  | 301R102U025GE2 | 148.0         | 70.9  | 1.68          | 2.29  | .77 x 1.15  |
| 1200                  | 301R122M025ER2 | 90.0          | 34.0  | 2.20          | 3.58  | .51 x 1.73  |
| 1200                  | 301R122M025FK2 | 132.0         | 45.0  | 1.71          | 2.93  | .65 x 1.04  |
| 1200                  | 301122U025LV2  | 100.0         | 50.0  | 2.26          | 3.20  | .73 x 1.63  |
| 1500                  | 301R152M025FF2 | 95.0          | 39.0  | 2.20          | 3.44  | .65 x 1.32  |
| 1800                  | 301R182M025FQ2 | 75.0          | 32.0  | 2.59          | 3.97  | .65 x 1.48  |
| 1800                  | 301182U025HE2  | 117.0         | 62.1  | 2.07          | 2.68  | .895 x 1.15 |
| 1800                  | 301R182U025HE2 | 102.0         | 47.7  | 2.23          | 3.06  | .895 x 1.15 |
| 2200                  | 301R222M025FV2 | 73.0          | 31.0  | 2.69          | 4.13  | .65 x 1.65  |
| 2200                  | 301R222M025LQ2 | 70.0          | 30.0  | 2.84          | 4.34  | .73 x 1.48  |
| 2200                  | 301222U025GJ2  | 86.3          | 41.4  | 2.42          | 3.30  | .77 x 1.65  |
| 2200                  | 301R222U025GJ2 | 74.8          | 35.9  | 2.60          | 3.54  | .77 x 1.65  |
| 2700                  | 301R272M025LV2 | 62.0          | 26.0  | 3.22          | 4.97  | .73 x 1.63  |
| 2700                  | 301272U025JE2  | 95.8          | 57.5  | 2.39          | 2.91  | 1.02 x 1.15 |
| 2700                  | 301R272U025JE2 | 83.0          | 41.5  | 2.57          | 3.42  | 1.02 x 1.15 |
| 3300                  | 301332U025GL2  | 58.4          | 28.1  | 3.69          | 5.02  | .77 x 2.15  |
| 3300                  | 301R332U025GL2 | 50.6          | 24.3  | 3.97          | 5.40  | .77 x 2.15  |
| 3300                  | 301332U025HJ2  | 59.7          | 31.6  | 3.44          | 4.45  | .895 x 1.65 |
| 3300                  | 301R332U025HJ2 | 51.7          | 24.3  | 3.69          | 5.07  | .895 x 1.65 |
| 4700                  | 301472U025GP2  | 44.7          | 21.4  | 4.71          | 6.40  | .77 x 2.65  |
| 4700                  | 301R472U025GP2 | 38.7          | 18.6  | 5.05          | 6.88  | .77 x 2.65  |
| 4700                  | 301472U025JJ2  | 48.9          | 29.4  | 4.12          | 5.01  | 1.02 x 1.65 |
| 4700                  | 301R472U025JJ2 | 42.4          | 21.2  | 4.42          | 5.90  | 1.02 x 1.65 |

# Type 300/301 –55 °C to 105 °C Long-Life, Switching Power Grade Radial

## High Capacitance and Ultra-Low ESR

| Cap.<br>(µF)          | Catalog<br>Part Number | ESR MAX               |       | Ripple MAX           |       | Nom Size      |
|-----------------------|------------------------|-----------------------|-------|----------------------|-------|---------------|
|                       |                        | @ 25°C                |       | @ 85°C               |       | Insulated     |
|                       |                        | 120 Hz 20 kHz<br>(mΩ) |       | 120 Hz 20 kHz<br>(A) |       | D x L<br>(in) |
| 25 Vdc (35 Vdc Surge) |                        |                       |       |                      |       |               |
| 5600                  | 301562U025GS2          | 36.5                  | 17.5  | 5.68                 | 7.73  | .77 x 3.15    |
| 5600                  | 301R562U025GS2         | 31.6                  | 15.2  | 6.10                 | 8.30  | .77 x 3.15    |
| 5600                  | 301562U025HL2          | 42.0                  | 22.3  | 4.74                 | 6.14  | .895 x 2.15   |
| 5600                  | 301R562U025HL2         | 30.4                  | 14.3  | 5.58                 | 7.67  | .895 x 2.15   |
| 6800                  | 301682U025GT2          | 31.2                  | 15.0  | 6.55                 | 8.91  | .77 x 3.65    |
| 6800                  | 301R682U025GT2         | 27.0                  | 13.0  | 7.04                 | 9.58  | .77 x 3.65    |
| 6800                  | 301682U025HP2          | 31.3                  | 16.6  | 6.11                 | 7.91  | .895 x 2.65   |
| 6800                  | 301R682U025HP2         | 23.1                  | 10.9  | 7.11                 | 9.77  | .895 x 2.65   |
| 6800                  | 301682U025JL2          | 33.5                  | 20.1  | 5.71                 | 6.94  | 1.02 x 2.15   |
| 6800                  | 301R682U025JL2         | 22.5                  | 11.3  | 6.96                 | 9.29  | 1.02 x 2.15   |
| 8200                  | 301822U025HS2          | 25.8                  | 13.7  | 7.34                 | 9.50  | .895 x 3.15   |
| 8200                  | 301R822U025HS2         | 18.9                  | 8.9   | 8.59                 | 11.81 | .895 x 3.15   |
| 10000                 | 301103U025HT2          | 22.3                  | 11.8  | 8.45                 | 10.94 | .895 x 3.65   |
| 10000                 | 301R103U025HT2         | 16.0                  | 7.5   | 9.96                 | 13.69 | .895 x 3.65   |
| 10000                 | 301103U025JP2          | 26.0                  | 15.6  | 7.20                 | 8.77  | 1.02 x 2.65   |
| 10000                 | 301R103U025JP2         | 17.2                  | 8.6   | 8.84                 | 11.80 | 1.02 x 2.65   |
| 12000                 | 301123U025JS2          | 21.6                  | 12.9  | 8.59                 | 10.50 | 1.02 x 3.15   |
| 12000                 | 301R123U025JS2         | 14.1                  | 7.1   | 10.60                | 14.10 | 1.02 x 3.15   |
| 15000                 | 301153U025JT2          | 18.7                  | 11.2  | 9.90                 | 12.10 | 1.02 x 3.65   |
| 15000                 | 301R153U025JT2         | 12.1                  | 6.0   | 12.30                | 16.40 | 1.02 x 3.65   |
| 40 Vdc (60 Vdc Surge) |                        |                       |       |                      |       |               |
| 220                   | 301221U040FK2          | 480.0                 | 140.0 | 0.89                 | 1.65  | .65 x 1.04    |
| 330                   | 301R331M040EM2         | 202.0                 | 68.0  | 1.19                 | 2.05  | .51 x 1.10    |
| 330                   | 301331U040FN2          | 330.0                 | 120.0 | 1.35                 | 2.24  | .65 x 1.32    |
| 390                   | 301391U040ER2          | 270.0                 | 150.0 | 1.42                 | 1.90  | .51 x 1.73    |
| 470                   | 301R471M040FK2         | 133.0                 | 46.0  | 1.66                 | 2.82  | .65 x 1.04    |
| 680                   | 301R681M040ER2         | 95.0                  | 35.0  | 2.07                 | 3.41  | .51 x 1.73    |
| 820                   | 301821U040LV2          | 160.0                 | 75.0  | 1.78                 | 2.60  | .73 x 1.63    |
| 1000                  | 301R102M040FQ2         | 80.0                  | 33.0  | 2.49                 | 3.87  | .65 x 1.48    |
| 1200                  | 301122U040HE2          | 137.0                 | 65.6  | 1.92                 | 2.61  | .895 x 1.15   |
| 1200                  | 301R122U040HE2         | 118.0                 | 52.1  | 2.06                 | 2.93  | .895 x 1.15   |
| 1500                  | 301R152M040LV2         | 63.0                  | 27.0  | 3.16                 | 4.82  | .73 x 1.63    |
| 1500                  | 301152U040JE2          | 109.0                 | 60.2  | 2.24                 | 2.84  | 1.02 x 1.15   |
| 1500                  | 301R152U040JE2         | 94.8                  | 43.6  | 2.40                 | 3.34  | 1.02 x 1.15   |
| 2200                  | 301222U040HJ2          | 69.4                  | 33.3  | 3.18                 | 4.33  | .895 x 1.65   |
| 2200                  | 301R222U040HJ2         | 60.2                  | 26.5  | 3.42                 | 4.86  | .895 x 1.65   |
| 3300                  | 301332U040HL2          | 47.2                  | 22.6  | 4.48                 | 6.09  | .895 x 2.15   |
| 3300                  | 301R332U040HL2         | 36.0                  | 15.8  | 5.12                 | 7.28  | .895 x 2.15   |
| 3300                  | 301332U040JJ2          | 55.8                  | 30.7  | 3.86                 | 4.90  | 1.02 x 1.65   |
| 3300                  | 301R332U040JJ2         | 48.3                  | 22.2  | 4.14                 | 5.76  | 1.02 x 1.65   |
| 3900                  | 301R392U040GS2         | 37.1                  | 16.7  | 5.63                 | 7.92  | .77 x 3.15    |
| 4700                  | 301472U040GT2          | 36.4                  | 16.4  | 6.06                 | 8.52  | .77 x 3.65    |
| 4700                  | 301R472U040GT2         | 31.6                  | 14.2  | 6.51                 | 9.15  | .77 x 3.65    |

| Cap.<br>(µF)                 | Catalog<br>Part Number | ESR MAX<br>@ 25°C     |                      | Ripple MAX<br>@ 85°C  |                      | Nom Size<br>Insulated<br>D x L<br>(in) |
|------------------------------|------------------------|-----------------------|----------------------|-----------------------|----------------------|----------------------------------------|
|                              |                        | 120 Hz 20 kHz<br>(mΩ) | 120 Hz 20 kHz<br>(A) | 120 Hz 20 kHz<br>(mΩ) | 120 Hz 20 kHz<br>(A) |                                        |
| 4700                         | 301472U040HP2          | 36.2                  | 17.4                 | 5.68                  | 7.73                 | .895 x 2.65                            |
| 4700                         | 301R472U040HP2         | 27.4                  | 12.0                 | 6.54                  | 9.29                 | .895 x 2.65                            |
| 4700                         | 301472U040JL2          | 38.1                  | 20.9                 | 5.35                  | 6.81                 | 1.02 x 2.15                            |
| 4700                         | 301R472U040JL2         | 26.5                  | 12.2                 | 6.42                  | 8.93                 | 1.02 x 2.15                            |
| 5600                         | 301562U040HS2          | 29.7                  | 14.3                 | 6.84                  | 9.31                 | .895 x 3.15                            |
| 5600                         | 301R562U040HS2         | 22.2                  | 9.8                  | 7.91                  | 11.20                | .895 x 3.15                            |
| 6800                         | 301682U040HT2          | 25.5                  | 12.3                 | 7.89                  | 10.70                | .895 x 3.65                            |
| 6800                         | 301R682U040HT2         | 18.9                  | 8.3                  | 9.18                  | 13.10                | .895 x 3.65                            |
| 6800                         | 301682U040JP2          | 29.4                  | 16.2                 | 6.77                  | 8.61                 | 1.02 x 2.65                            |
| 6800                         | 301R682U040JP2         | 20.2                  | 9.3                  | 8.17                  | 11.40                | 1.02 x 2.65                            |
| 8200                         | 301822U040JS2          | 24.3                  | 13.4                 | 8.09                  | 10.30                | 1.02 x 3.15                            |
| 8200                         | 301R822U040JS2         | 16.5                  | 7.6                  | 9.82                  | 13.60                | 1.02 x 3.15                            |
| 10000                        | 301103U040JT2          | 21.0                  | 11.5                 | 9.35                  | 11.90                | 1.02 x 3.65                            |
| 10000                        | 301R103U040JT2         | 14.1                  | 6.5                  | 11.40                 | 15.90                | 1.02 x 3.65                            |
| <b>50 Vdc (75 Vdc Surge)</b> |                        |                       |                      |                       |                      |                                        |
| 100                          | 301101U050EN2          | 810.0                 | 260.0                | 0.65                  | 1.14                 | .51 x 1.38                             |
| 120                          | 301R121M050EG2         | 391.0                 | 139.0                | 0.79                  | 1.33                 | .51 x .85                              |
| 150                          | 301151U050FK2          | 550.0                 | 220.0                | 0.82                  | 1.30                 | .65 x 1.04                             |
| 180                          | 301R181M050EK2         | 261.0                 | 90.0                 | 0.95                  | 1.61                 | .51 x 1.04                             |
| 180                          | 301181U050ER2          | 500.0                 | 180.0                | 0.93                  | 1.55                 | .51 x 1.73                             |
| 220                          | 301R221M050EM2         | 240.0                 | 69.0                 | 1.12                  | 2.08                 | .51 x 1.04                             |
| 220                          | 301221U050FN2          | 420.0                 | 150.0                | 1.09                  | 1.83                 | .65 x 1.32                             |
| 330                          | 301R331M050EN2         | 221.0                 | 63.0                 | 1.19                  | 2.22                 | .51 x 1.38                             |
| 390                          | 301R391M050FK2         | 150.0                 | 48.0                 | 1.60                  | 2.82                 | .65 x 1.04                             |
| 470                          | 301R471M050ER2         | 111.0                 | 36.0                 | 1.97                  | 3.46                 | .51 x 1.73                             |
| 470                          | 301471U050LV2          | 250.0                 | 90.0                 | 1.44                  | 2.40                 | .73 x 1.63                             |
| 560                          | 301R561M050FF2         | 118.0                 | 41.0                 | 1.98                  | 3.36                 | .65 x 1.32                             |
| 560                          | 301R561U050GE2         | 216.0                 | 88.6                 | 1.39                  | 2.05                 | .77 x 1.15                             |
| 560                          | 301561U050GE2          | 249.0                 | 102.0                | 1.29                  | 1.91                 | .77 x 1.15                             |
| 680                          | 301R681M050FQ2         | 102.0                 | 40.0                 | 2.31                  | 3.69                 | .65 x 1.48                             |
| 820                          | 301R821M050FV2         | 95.0                  | 38.0                 | 2.40                  | 3.79                 | .65 x 1.63                             |
| 820                          | 301R821M050LQ2         | 89.0                  | 36.0                 | 2.59                  | 4.07                 | .73 x 1.48                             |
| 1000                         | 301R102M050LV2         | 77.0                  | 28.0                 | 2.90                  | 4.81                 | .73 x 1.63                             |
| 1200                         | 301R122U050GJ2         | 109.0                 | 44.7                 | 2.16                  | 3.18                 | .77 x 1.65                             |
| 1200                         | 301122U050GJ2          | 126.0                 | 51.6                 | 2.01                  | 2.96                 | .77 x 1.65                             |
| 1200                         | 301122U050JE2          | 130.0                 | 62.4                 | 2.05                  | 2.79                 | 1.02 x 1.15                            |
| 1200                         | 301R122U050JE2         | 113.0                 | 43.9                 | 2.21                  | 3.33                 | 1.02 x 1.15                            |
| 1500                         | 301R152U050GL2         | 73.4                  | 30.1                 | 3.29                  | 4.85                 | .77 x 2.15                             |
| 1500                         | 301152U050GL2          | 84.7                  | 34.7                 | 3.07                  | 4.52                 | .77 x 2.15                             |
| 1800                         | 301182U050HJ2          | 84.0                  | 34.5                 | 2.89                  | 4.26                 | .895 x 1.65                            |
| 1800                         | 301R182U050HJ2         | 72.8                  | 26.2                 | 3.11                  | 4.89                 | .895 x 1.65                            |
| 2200                         | 301R222U050GP2         | 55.8                  | 22.9                 | 4.21                  | 6.20                 | .77 x 2.65                             |
| 2200                         | 301222U050GP2          | 64.4                  | 26.4                 | 3.92                  | 5.77                 | .77 x 2.65                             |
| 2700                         | 301R272U050GS2         | 45.3                  | 18.6                 | 5.10                  | 7.51                 | .77 x 3.15                             |



# Type 300/301 –55 °C to 105 °C Long-Life, Switching Power Grade Radial

## High Capacitance and Ultra-Low ESR

|                       |                        | ESR MAX               |      | Ripple MAX           |       | Nom Size      |
|-----------------------|------------------------|-----------------------|------|----------------------|-------|---------------|
|                       |                        | @ 25°C                |      | @ 85°C               |       | Insulated     |
| Cap.<br>(µF)          | Catalog<br>Part Number | 120 Hz 20 kHz<br>(mΩ) |      | 120 Hz 20 kHz<br>(A) |       | D x L<br>(in) |
| 2700                  | 301272U050GS2          | 52.3                  | 21.4 | 4.75                 | 6.99  | .77 x 3.15    |
| 2700                  | 301272U050HL2          | 56.9                  | 23.3 | 4.07                 | 6.00  | .895 x 2.15   |
| 2700                  | 301R272U050HL2         | 44.5                  | 16.0 | 4.61                 | 7.24  | .895 x 2.15   |
| 2700                  | 301272U050JJ2          | 66.0                  | 31.7 | 3.54                 | 4.82  | 1.02 x 1.65   |
| 2700                  | 301R272U050JJ2         | 57.2                  | 22.3 | 3.81                 | 5.75  | 1.02 x 1.65   |
| 3300                  | 301R332U050GT2         | 38.4                  | 15.7 | 5.90                 | 8.69  | .77 x 3.65    |
| 3300                  | 301332U050GT2          | 44.3                  | 18.2 | 5.49                 | 8.09  | .77 x 3.65    |
| 3300                  | 301332U050HP2          | 43.5                  | 17.8 | 5.18                 | 7.63  | .895 x 2.65   |
| 3300                  | 301R332U050HP2         | 33.7                  | 12.1 | 5.89                 | 9.26  | .895 x 2.65   |
| 3900                  | 301392U050JL2          | 44.9                  | 21.6 | 4.93                 | 6.71  | 1.02 x 2.15   |
| 3900                  | 301R392U050JL2         | 32.4                  | 12.6 | 5.81                 | 8.77  | 1.02 x 2.15   |
| 4700                  | 301472U050HS2          | 35.6                  | 14.6 | 6.25                 | 9.21  | .895 x 3.15   |
| 4700                  | 301R472U050HS2         | 27.3                  | 9.8  | 7.14                 | 11.20 | .895 x 3.15   |
| 5600                  | 301562U050HT2          | 30.4                  | 12.5 | 7.23                 | 10.60 | .895 x 3.65   |
| 5600                  | 301R562U050HT2         | 23.1                  | 8.3  | 8.30                 | 13.00 | .895 x 3.65   |
| 5600                  | 301562U050JP2          | 34.5                  | 16.6 | 6.25                 | 8.50  | 1.02 x 2.65   |
| 5600                  | 301R562U050JP2         | 24.6                  | 9.6  | 7.40                 | 11.20 | 1.02 x 2.65   |
| 6800                  | 301682U050JS2          | 28.4                  | 13.6 | 7.48                 | 10.20 | 1.02 x 3.15   |
| 6800                  | 301R682U050JS2         | 20.0                  | 7.8  | 8.91                 | 13.40 | 1.02 x 3.15   |
| 8200                  | 301822U050JT2          | 24.4                  | 11.7 | 8.67                 | 11.80 | 1.02 x 3.65   |
| 8200                  | 301R822U050JT2         | 17.0                  | 6.6  | 10.40                | 15.70 | 1.02 x 3.65   |
| 63 Vdc (90 Vdc Surge) |                        |                       |      |                      |       |               |
| 120                   | 301R121M063EG2         | 451.0                 | 93.0 | 0.73                 | 1.60  | .51 x .85     |
| 180                   | 301R181M063EK2         | 298.0                 | 90.0 | 1.01                 | 1.83  | .51 x 1.04    |
| 270                   | 301R271M063EN2         | 160.0                 | 55.0 | 1.44                 | 2.46  | .51 x 1.38    |
| 330                   | 301R331M063FK2         | 171.0                 | 50.0 | 1.48                 | 2.74  | .65 x 1.04    |
| 390                   | 301R391M063ER2         | 130.0                 | 38.0 | 1.83                 | 3.38  | .51 x 1.73    |
| 390                   | 301391U063GE2          | 281.0                 | 92.7 | 1.22                 | 2.00  | .77 x 1.15    |
| 390                   | 301R391U063GE2         | 243.0                 | 80.3 | 1.31                 | 2.15  | .77 x 1.15    |
| 470                   | 301R471M063FF2         | 142.0                 | 43.0 | 1.80                 | 3.27  | .65 x 1.32    |
| 560                   | 301R561M063FQ2         | 120.0                 | 35.0 | 2.05                 | 3.80  | .65 x 1.48    |
| 680                   | 301R681M063FV2         | 113.0                 | 32.0 | 2.06                 | 3.87  | .65 x 1.65    |
| 680                   | 301R681M063LQ2         | 103.0                 | 29.0 | 2.21                 | 4.17  | .73 x 1.48    |
| 680                   | 301681U063HE2          | 185.0                 | 70.5 | 1.65                 | 2.52  | .895 x 1.15   |
| 680                   | 301R681U063HE2         | 161.0                 | 53.0 | 1.77                 | 2.90  | .895 x 1.15   |
| 820                   | 301R821M063LV2         | 90.0                  | 29.0 | 2.69                 | 4.74  | .73 x 1.63    |
| 820                   | 301821U063GJ2          | 142.0                 | 46.7 | 1.89                 | 3.11  | .77 x 1.65    |
| 820                   | 301R821U063GJ2         | 123.0                 | 40.5 | 2.03                 | 3.34  | .77 x 1.65    |
| 1000                  | 301102U063JE2          | 144.0                 | 63.2 | 1.95                 | 2.78  | 1.02 x 1.15   |
| 1000                  | 301R102U063JE2         | 124.0                 | 43.5 | 2.10                 | 3.34  | 1.02 x 1.15   |
| 1200                  | 301122U063GL2          | 95.2                  | 31.4 | 2.89                 | 4.75  | .77 x 2.15    |
| 1200                  | 301R122U063GL2         | 82.5                  | 27.2 | 3.11                 | 5.10  | .77 x 2.15    |
| 1200                  | 301122U063HJ2          | 93.8                  | 35.6 | 2.74                 | 4.19  | .895 x 1.65   |
| 1200                  | 301R122U063HJ2         | 81.3                  | 26.8 | 2.94                 | 4.83  | .895 x 1.65   |

|                        |                        | ESR MAX               |       | Ripple MAX           |       | Nom Size      |
|------------------------|------------------------|-----------------------|-------|----------------------|-------|---------------|
|                        |                        | @ 25°C                |       | @ 85°C               |       | Insulated     |
| Cap.<br>(µF)           | Catalog<br>Part Number | 120 Hz 20 kHz<br>(mΩ) |       | 120 Hz 20 kHz<br>(A) |       | D x L<br>(in) |
| 1500                   | 301152U063GP2          | 72.3                  | 23.8  | 3.70                 | 6.07  | .77 x 2.65    |
| 1500                   | 301R152U063GP2         | 62.6                  | 20.7  | 3.97                 | 6.52  | .77 x 2.65    |
| 1800                   | 301182U063HL2          | 63.4                  | 24.1  | 3.86                 | 5.90  | .895 x 2.15   |
| 1800                   | 301R182U063HL2         | 50.1                  | 16.5  | 4.34                 | 7.13  | .895 x 2.15   |
| 1800                   | 301182U063JJ2          | 72.8                  | 32.0  | 3.37                 | 4.80  | 1.02 x 1.65   |
| 1800                   | 301R182U063JJ2         | 63.1                  | 22.1  | 3.62                 | 5.78  | 1.02 x 1.65   |
| 2200                   | 301222U063GS2          | 58.6                  | 19.3  | 4.48                 | 7.36  | .77 x 3.15    |
| 2200                   | 301R222U063GS2         | 50.8                  | 16.8  | 4.82                 | 7.90  | .77 x 3.15    |
| 2200                   | 301222U063GT2          | 49.6                  | 16.4  | 5.19                 | 8.53  | .77 x 3.65    |
| 2200                   | 301R222U063GT2         | 43.0                  | 14.2  | 5.58                 | 9.16  | .77 x 3.65    |
| 2700                   | 301272U063HP2          | 48.4                  | 18.4  | 4.92                 | 7.52  | .895 x 2.65   |
| 2700                   | 301R272U063HP2         | 37.9                  | 12.5  | 5.55                 | 9.11  | .895 x 2.65   |
| 2700                   | 301272U063JL2          | 49.5                  | 21.8  | 4.70                 | 6.68  | 1.02 x 2.15   |
| 2700                   | 301R272U063JL2         | 36.3                  | 12.7  | 5.48                 | 8.74  | 1.02 x 2.15   |
| 3300                   | 301332U063HS2          | 39.5                  | 15.0  | 5.94                 | 9.08  | .895 x 3.15   |
| 3300                   | 301R332U063HS2         | 30.7                  | 10.1  | 6.73                 | 11.10 | .895 x 3.15   |
| 3900                   | 301392U063HT2          | 33.7                  | 12.8  | 6.87                 | 10.50 | .895 x 3.65   |
| 3900                   | 301R392U063HT2         | 25.9                  | 8.5   | 7.84                 | 12.90 | .895 x 3.65   |
| 3900                   | 301392U063JP2          | 37.9                  | 16.7  | 5.96                 | 8.47  | 1.02 x 2.65   |
| 3900                   | 301R392U063JP2         | 27.6                  | 9.7   | 6.99                 | 11.10 | 1.02 x 2.65   |
| 4700                   | 301472U063JS2          | 31.1                  | 13.7  | 7.15                 | 10.20 | 1.02 x 3.15   |
| 4700                   | 301R472U063JS2         | 22.4                  | 7.8   | 8.42                 | 13.40 | 1.02 x 3.15   |
| 5600                   | 301562U063JT2          | 26.7                  | 11.7  | 8.30                 | 11.80 | 1.02 x 3.65   |
| 5600                   | 301R562U063JT2         | 19.0                  | 6.6   | 9.83                 | 15.70 | 1.02 x 3.65   |
| 75 Vdc (100 Vdc Surge) |                        |                       |       |                      |       |               |
| 330                    | 301331U075GE2          | 360.0                 | 155.0 | 1.08                 | 1.55  | .77 x 1.15    |
| 330                    | 301R331U075GE2         | 312.0                 | 134.0 | 1.16                 | 1.66  | .77 x 1.15    |
| 470                    | 301471U075HE2          | 234.0                 | 108.0 | 1.47                 | 2.04  | .895 x 1.15   |
| 470                    | 301R471U075HE2         | 203.0                 | 87.3  | 1.57                 | 2.26  | .895 x 1.15   |
| 560                    | 301561U075GJ2          | 181.0                 | 77.8  | 1.67                 | 2.41  | .77 x 1.65    |
| 560                    | 301R561U075GJ2         | 157.0                 | 67.4  | 1.80                 | 2.59  | .77 x 1.65    |
| 680                    | 301681U075JE2          | 178.0                 | 88.8  | 1.76                 | 2.34  | 1.02 x 1.15   |
| 680                    | 301R681U075JE2         | 154.0                 | 67.7  | 1.89                 | 2.68  | 1.02 x 1.15   |
| 1000                   | 301102U075GL2          | 122.0                 | 52.3  | 2.56                 | 3.68  | .77 x 2.15    |
| 1000                   | 301R102U075GL2         | 105.0                 | 45.3  | 2.75                 | 3.95  | .77 x 2.15    |
| 1000                   | 301102U075HJ2          | 118.0                 | 54.3  | 2.44                 | 3.39  | .895 x 1.65   |
| 1000                   | 301R102U075HJ2         | 102.0                 | 44.0  | 2.62                 | 3.77  | .895 x 1.65   |
| 1200                   | 301122U075GP2          | 92.0                  | 39.5  | 3.28                 | 4.71  | .77 x 2.65    |
| 1200                   | 301R122U075GP2         | 79.7                  | 34.3  | 3.52                 | 5.06  | .77 x 2.65    |
| 1500                   | 301152U075GS2          | 74.4                  | 32.0  | 3.98                 | 5.72  | .77 x 3.15    |
| 1500                   | 301R152U075GS2         | 64.4                  | 27.7  | 4.27                 | 6.15  | .77 x 3.15    |
| 1500                   | 301152U075HL2          | 79.7                  | 36.6  | 3.44                 | 4.79  | .895 x 2.15   |
| 1500                   | 301R152U075HL2         | 64.2                  | 27.6  | 3.84                 | 5.52  | .895 x 2.15   |
| 1500                   | 301152U075JJ2          | 89.9                  | 44.9  | 3.04                 | 4.05  | 1.02 x 1.65   |



# Type 300/301 –55 °C to 105 °C Long-Life, Switching Power Grade Radial

## High Capacitance and Ultra-Low ESR

|                         |                        | ESR MAX               |       | Ripple MAX           |       | Nom Size      |
|-------------------------|------------------------|-----------------------|-------|----------------------|-------|---------------|
|                         |                        | @ 25°C                |       | @ 85°C               |       | Insulated     |
| Cap.<br>(µF)            | Catalog<br>Part Number | 120 Hz 20 kHz<br>(mΩ) |       | 120 Hz 20 kHz<br>(A) |       | D x L<br>(in) |
| 1500                    | 301R152U075JJ2         | 77.9                  | 34.3  | 3.26                 | 4.64  | 1.02 x 1.65   |
| 1800                    | 301182U075GT2          | 62.7                  | 27.0  | 4.62                 | 6.64  | .77 x 3.65    |
| 1800                    | 301R182U075GT2         | 54.3                  | 23.4  | 4.96                 | 7.13  | .77 x 3.65    |
| 2200                    | 301222U075HP2          | 60.6                  | 27.9  | 4.39                 | 6.11  | .895 x 2.65   |
| 2200                    | 301R222U075HP2         | 48.5                  | 20.9  | 4.91                 | 7.06  | .895 x 2.65   |
| 2200                    | 301222U075JL2          | 60.8                  | 30.4  | 4.24                 | 5.65  | 1.02 x 2.15   |
| 2200                    | 301R222U075JL2         | 46.2                  | 20.3  | 4.86                 | 6.91  | 1.02 x 2.15   |
| 2700                    | 301272U075HS2          | 49.2                  | 22.6  | 5.32                 | 7.39  | .895 x 3.15   |
| 2700                    | 301R272U075HS2         | 39.1                  | 16.8  | 5.96                 | 8.57  | .895 x 3.15   |
| 2700                    | 301272U075HT2          | 41.8                  | 19.2  | 6.17                 | 8.58  | .895 x 3.65   |
| 2700                    | 301R272U075HT2         | 32.9                  | 14.2  | 6.95                 | 9.99  | .895 x 3.65   |
| 2700                    | 301272U075JP2          | 46.4                  | 23.2  | 5.39                 | 7.18  | 1.02 x 2.65   |
| 2700                    | 301R272U075JP2         | 35.0                  | 15.4  | 6.21                 | 8.82  | 1.02 x 2.65   |
| 3300                    | 301332U075JS2          | 37.9                  | 19.0  | 6.47                 | 8.63  | 1.02 x 3.15   |
| 3300                    | 301R332U075JS2         | 28.3                  | 12.5  | 7.49                 | 10.60 | 1.02 x 3.15   |
| 3900                    | 301392U075JT2          | 32.4                  | 16.2  | 7.53                 | 10.00 | 1.02 x 3.65   |
| 3900                    | 301R392U075JT2         | 23.9                  | 10.5  | 8.76                 | 12.40 | 1.02 x 3.65   |
| 100 Vdc (140 Vdc Surge) |                        |                       |       |                      |       |               |
| 47                      | 301470U100EG2          | 1770.0                | 345.0 | 0.38                 | 0.74  | .51 x .85     |
| 68                      | 301680U100EM2          | 1160.0                | 183.0 | 0.42                 | 1.10  | .51 x 1.10    |
| 100                     | 301101U100EN2          | 756.0                 | 149.0 | 0.52                 | 1.37  | .51 x 1.38    |
| 120                     | 301121U100FK2          | 686.0                 | 139.0 | 0.55                 | 1.48  | .65 x 1.04    |
| 150                     | 301151U100ER2          | 519.0                 | 104.0 | 0.61                 | 1.83  | .51 x 1.73    |
| 150                     | 301151U100GE2          | 581.0                 | 221.0 | 0.85                 | 1.30  | .77 x 1.15    |
| 150                     | 301R151U100GE2         | 503.0                 | 191.0 | 0.91                 | 1.39  | .77 x 1.15    |
| 180                     | 301181U100FF2          | 450.0                 | 93.0  | 0.64                 | 2.00  | .65 x 1.32    |
| 220                     | 301221U100FQ2          | 365.0                 | 76.0  | 0.69                 | 2.31  | .65 x 1.48    |
| 220                     | 301221U100HE2          | 371.0                 | 141.0 | 1.16                 | 1.78  | .895 x 1.15   |
| 220                     | 301R221U100HE2         | 321.0                 | 122.0 | 1.25                 | 1.91  | .895 x 1.15   |
| 270                     | 301271U100FV2          | 298.0                 | 63.0  | 0.75                 | 2.64  | .65 x 1.65    |
| 270                     | 301271U100GJ2          | 291.0                 | 111.0 | 1.32                 | 2.02  | .77 x 1.65    |
| 270                     | 301R271U100GJ2         | 252.0                 | 95.9  | 1.42                 | 2.17  | .77 x 1.65    |
| 330                     | 301331U100LQ2          | 249.0                 | 55.0  | 0.81                 | 2.94  | .73 x 1.48    |
| 330                     | 301331U100JE2          | 273.0                 | 109.0 | 1.42                 | 2.11  | 1.02 x 1.15   |
| 330                     | 301R331U100JE2         | 237.0                 | 92.3  | 1.52                 | 2.30  | 1.02 x 1.15   |
| 390                     | 301391U100LV2          | 210.0                 | 47.0  | 0.87                 | 3.35  | .73 x 1.63    |
| 470                     | 301471U100GL2          | 195.0                 | 74.1  | 2.02                 | 3.09  | .77 x 2.15    |
| 470                     | 301R471U100GL2         | 169.0                 | 64.3  | 2.17                 | 3.32  | .77 x 2.15    |
| 470                     | 301471U100HJ2          | 186.0                 | 70.8  | 1.94                 | 2.97  | .895 x 1.65   |
| 470                     | 301R471U100HJ2         | 162.0                 | 61.4  | 2.09                 | 3.19  | .895 x 1.65   |
| 560                     | 301561U100GP2          | 147.0                 | 55.9  | 2.59                 | 3.96  | .77 x 2.65    |
| 560                     | 301R561U100GP2         | 128.0                 | 48.5  | 2.78                 | 4.26  | .77 x 2.65    |
| 680                     | 301681U100GS2          | 119.0                 | 45.0  | 3.15                 | 4.82  | .77 x 3.15    |
| 680                     | 301R681U100GS2         | 103.0                 | 39.0  | 3.39                 | 5.18  | .77 x 3.15    |

|                         |                        | ESR MAX               |        | Ripple MAX           |       | Nom Size      |
|-------------------------|------------------------|-----------------------|--------|----------------------|-------|---------------|
|                         |                        | @ 25°C                |        | @ 85°C               |       | Insulated     |
| Cap.<br>(µF)            | Catalog<br>Part Number | 120 Hz 20 kHz<br>(mΩ) |        | 120 Hz 20 kHz<br>(A) |       | D x L<br>(in) |
| 680                     | 301681U100HL2          | 125.0                 | 47.6   | 2.75                 | 4.20  | .895 x 2.15   |
| 680                     | 301R681U100HL2         | 104.0                 | 39.4   | 3.02                 | 4.62  | .895 x 2.15   |
| 680                     | 301681U100JJ2          | 138.0                 | 55.1   | 2.45                 | 3.66  | 1.02 x 1.65   |
| 680                     | 301R681U100JJ2         | 119.0                 | 46.5   | 2.64                 | 3.98  | 1.02 x 1.65   |
| 820                     | 301821U100GT2          | 99.5                  | 37.8   | 3.67                 | 5.61  | .77 x 3.65    |
| 820                     | 301R821U100GT2         | 86.2                  | 32.8   | 3.94                 | 6.02  | .77 x 3.65    |
| 1000                    | 301102U100HP2          | 94.7                  | 36.0   | 3.51                 | 5.38  | .895 x 2.65   |
| 1000                    | 301R102U100HP2         | 78.1                  | 29.7   | 3.87                 | 5.92  | .895 x 2.65   |
| 1000                    | 301102U100JL2          | 92.7                  | 37.1   | 3.43                 | 5.12  | 1.02 x 2.15   |
| 1000                    | 301R102U100JL2         | 73.8                  | 28.8   | 3.85                 | 5.81  | 1.02 x 2.15   |
| 1200                    | 301122U100HS2          | 76.5                  | 29.1   | 4.26                 | 6.52  | .895 x 3.15   |
| 1200                    | 301R122U100HS2         | 62.8                  | 23.9   | 4.71                 | 7.20  | .895 x 3.15   |
| 1200                    | 301122U100HT2          | 64.5                  | 24.5   | 4.96                 | 7.59  | .895 x 3.65   |
| 1200                    | 301R122U100HT2         | 52.6                  | 20.0   | 5.50                 | 8.41  | .895 x 3.65   |
| 1200                    | 301122U100JP2          | 70.3                  | 28.1   | 4.38                 | 6.53  | 1.02 x 2.65   |
| 1200                    | 301R122U100JP2         | 55.7                  | 21.7   | 4.92                 | 7.43  | 1.02 x 2.65   |
| 1500                    | 301152U100JS2          | 57.0                  | 22.8   | 5.28                 | 7.87  | 1.02 x 3.15   |
| 1500                    | 301R152U100JS2         | 44.9                  | 17.5   | 5.95                 | 8.99  | 1.02 x 3.15   |
| 2200                    | 301222U100JT2          | 48.3                  | 19.3   | 6.17                 | 9.19  | 1.02 x 3.65   |
| 2200                    | 301R222U100JT2         | 37.7                  | 14.7   | 6.97                 | 10.50 | 1.02 x 3.65   |
| 160 Vdc (200 Vdc Surge) |                        |                       |        |                      |       |               |
| 15                      | 301150U160EG2          | 17500.0               | 1450.0 | 0.12                 | 0.40  | .51 x .85     |
| 22                      | 301220U160EK2          | 12800.0               | 960.0  | 0.14                 | 0.52  | .51 x 1.04    |
| 27                      | 301270U160EM2          | 9700.0                | 720.0  | 0.18                 | 0.66  | .51 x 1.10    |
| 39                      | 301390U160EN2          | 6210.0                | 600.0  | 0.23                 | 0.74  | .51 x 1.38    |
| 47                      | 301470U160FK2          | 6000.0                | 620.0  | 0.23                 | 0.70  | .65 x 1.04    |
| 56                      | 301560U160ER2          | 5110.0                | 500.0  | 0.28                 | 0.89  | .51 x 1.73    |
| 56                      | 301560T160GE2          | 1817.0                | 690.0  | 0.48                 | 0.73  | .77 x 1.15    |
| 68                      | 301680U160FF2          | 3500.0                | 350.0  | 0.36                 | 1.15  | .65 x 1.32    |
| 82                      | 301820U160FQ2          | 2950.0                | 320.0  | 0.50                 | 1.53  | .65 x 1.48    |
| 82                      | 301820T160HE2          | 1169.0                | 444.0  | 0.66                 | 1.00  | .895 x 1.15   |
| 100                     | 301101U160LQ2          | 2540.0                | 210.0  | 0.47                 | 1.65  | .73 x 1.48    |
| 100                     | 301101T160GJ2          | 1019.0                | 387.0  | 0.71                 | 1.08  | .77 x 1.65    |
| 120                     | 301121U160LV2          | 2010.0                | 190.0  | 0.55                 | 1.79  | .73 x 1.63    |
| 120                     | 301121T160JE2          | 904.0                 | 362.0  | 0.78                 | 1.16  | 1.02 x 1.15   |
| 150                     | 301151T160GL2          | 608.0                 | 231.0  | 1.15                 | 1.75  | .77 x 2.15    |
| 180                     | 301181T160HJ2          | 586.0                 | 222.0  | 1.10                 | 1.68  | .895 x 1.65   |
| 220                     | 301221T160GP2          | 457.0                 | 174.0  | 1.47                 | 2.25  | .77 x 2.65    |
| 270                     | 301271T160GS2          | 366.0                 | 139.0  | 1.79                 | 2.74  | .77 x 3.15    |
| 270                     | 301271T160HL2          | 391.0                 | 149.0  | 1.55                 | 2.38  | .895 x 2.15   |
| 270                     | 301271T160JJ2          | 415.0                 | 166.0  | 1.41                 | 2.11  | 1.02 x 1.65   |
| 330                     | 301331T160GT2          | 306.0                 | 116.0  | 2.09                 | 3.20  | .77 x 3.65    |
| 390                     | 301391T160HP2          | 268.0                 | 102.0  | 2.09                 | 3.19  | .895 x 2.65   |
| 390                     | 301391T160JL2          | 278.0                 | 111.0  | 1.98                 | 2.95  | 1.02 x 2.15   |

# Type 300/301 –55 °C to 105 °C Long-Life, Switching Power Grade Radial

## High Capacitance and Ultra-Low ESR

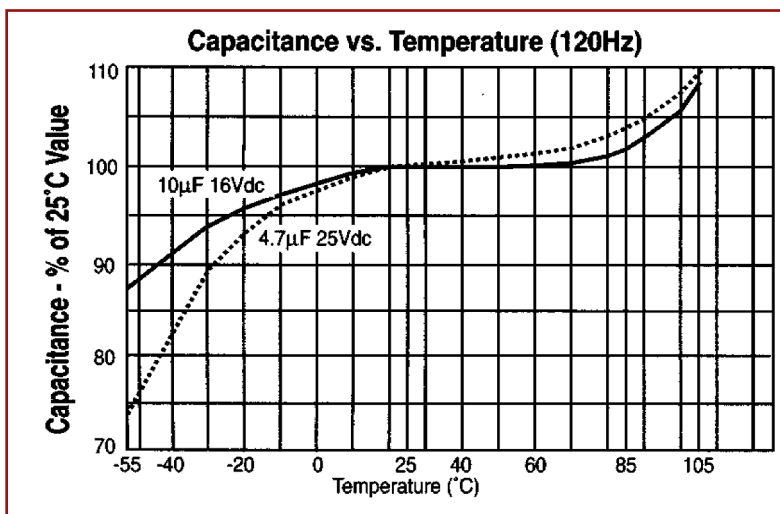
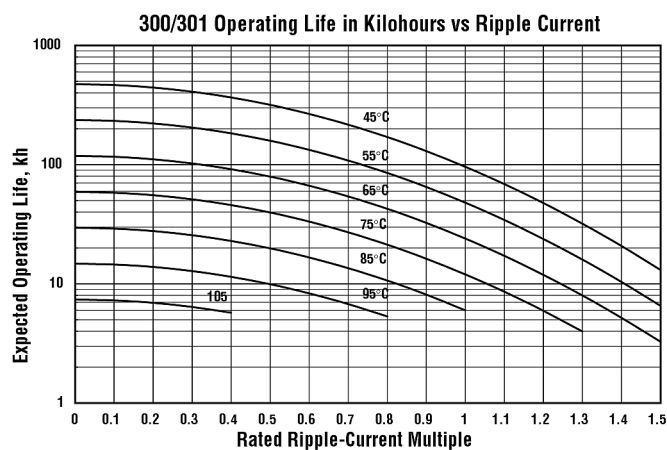
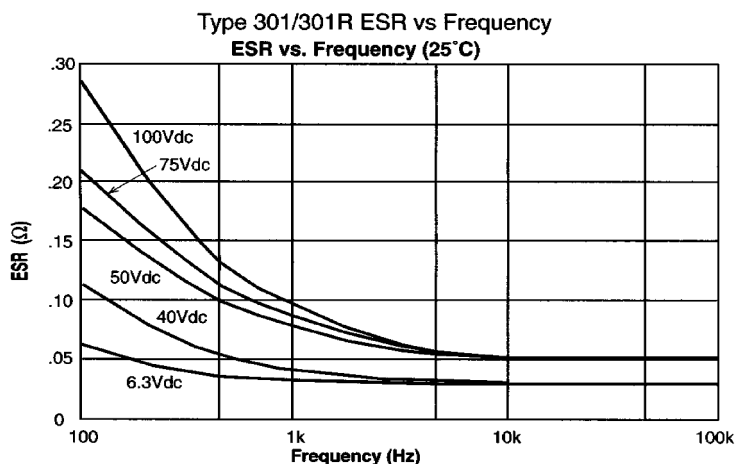
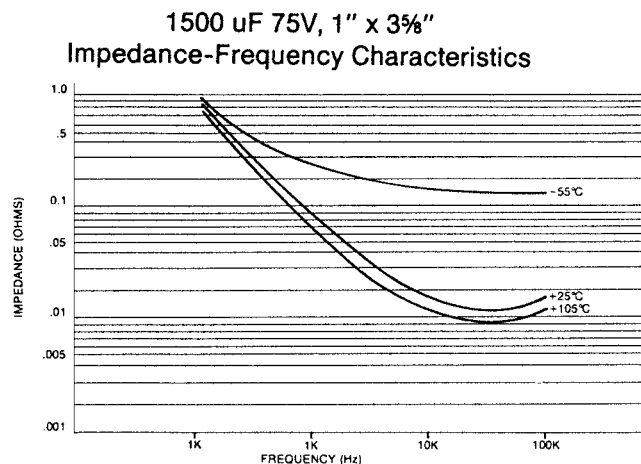
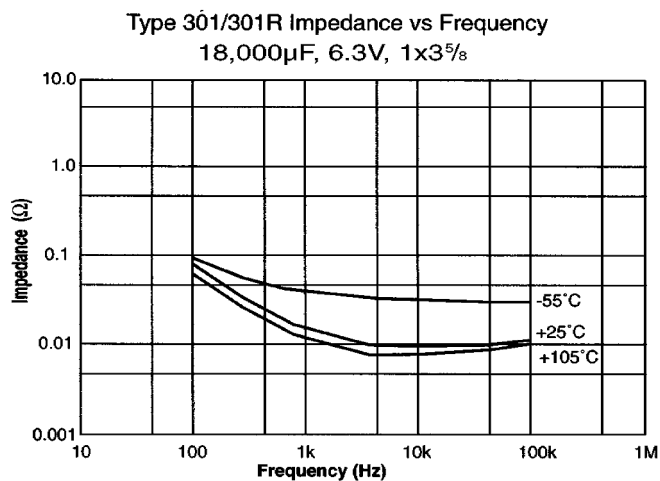
| Cap.<br>(μF)            | Catalog<br>Part Number | ESR MAX               |                      | Ripple MAX           |               | Nom Size    |
|-------------------------|------------------------|-----------------------|----------------------|----------------------|---------------|-------------|
|                         |                        | @ 25°C                |                      | @ 85°C               |               | Insulated   |
|                         |                        | 120 Hz 20 kHz<br>(mΩ) | 120 Hz 20 kHz<br>(A) | 120 Hz 20 kHz<br>(A) | D x L<br>(in) |             |
| 160 Vdc (200 Vdc Surge) |                        |                       |                      |                      |               |             |
| 470                     | 301471T160HS2          | 226.0                 | 85.7                 | 2.48                 | 3.80          | .895 x 3.15 |
| 470                     | 301471T160JP2          | 228.0                 | 91.4                 | 2.43                 | 3.62          | 1.02 x 2.65 |
| 560                     | 301561T160HT2          | 189.0                 | 71.8                 | 2.90                 | 4.44          | .895 x 3.65 |
| 560                     | 301561T160JS2          | 184.0                 | 73.5                 | 2.94                 | 4.39          | 1.02 x 3.15 |
| 680                     | 301681T160JT2          | 154.0                 | 61.6                 | 3.45                 | 5.15          | 1.02 x 3.65 |
| 200 Vdc (250 Vdc Surge) |                        |                       |                      |                      |               |             |
| 10                      | 301100U200EG2          | 19900.0               | 1780.0               | 0.12                 | 0.39          | .51 x .85   |
| 15                      | 301150U200EK2          | 15200.0               | 1270.0               | 0.14                 | 0.49          | .51 x 1.04  |
| 18                      | 301180U200EM2          | 10600.0               | 960.0                | 0.19                 | 0.63          | .51 x 1.10  |
| 22                      | 301220U200EN2          | 7010.0                | 580.0                | 0.22                 | 0.75          | .51 x 1.38  |
| 27                      | 301270U200FK2          | 6500.0                | 650.0                | 0.22                 | 0.68          | .65 x 1.04  |
| 33                      | 301330U200ER2          | 5990.0                | 550.0                | 0.26                 | 0.87          | .51 x 1.73  |
| 39                      | 301390U200FF2          | 3910.0                | 340.0                | 0.34                 | 1.15          | .65 x 1.32  |
| 47                      | 301470U200FQ2          | 3730.0                | 330.0                | 0.45                 | 1.50          | .65 x 1.48  |
| 56                      | 301560U200FV2          | 3250.0                | 290.0                | 0.47                 | 1.58          | .65 x 1.65  |
| 56                      | 301560T200GE2          | 2285.0                | 1051.0               | 0.43                 | 0.59          | .77 x 1.15  |
| 68                      | 301680U200LQ2          | 2840.0                | 260.0                | 0.53                 | 1.74          | .73 x 1.48  |
| 82                      | 301820U200LV2          | 2310.0                | 180.0                | 0.53                 | 1.89          | .73 x 1.63  |
| 82                      | 301820T200HE2          | 1423.0                | 655.0                | 0.59                 | 0.83          | .895 x 1.15 |
| 100                     | 301101T200GJ2          | 1144.0                | 526.0                | 0.67                 | 0.93          | .77 x 1.65  |
| 120                     | 301121T200JE2          | 1012.0                | 465.0                | 0.74                 | 1.02          | 1.02 x 1.15 |
| 150                     | 301151T200GL2          | 763.0                 | 351.0                | 1.02                 | 1.42          | .77 x 2.15  |
| 180                     | 301181T200HJ2          | 713.0                 | 328.0                | 0.99                 | 1.38          | .895 x 1.65 |
| 220                     | 301221T200GP2          | 574.0                 | 264.0                | 1.31                 | 1.82          | .77 x 2.65  |
| 220                     | 301221T200JJ2          | 507.0                 | 233.0                | 1.28                 | 1.78          | 1.02 x 1.65 |
| 270                     | 301271T200GS2          | 460.0                 | 212.0                | 1.60                 | 2.22          | .77 x 3.15  |
| 270                     | 301271T200HL2          | 476.0                 | 219.0                | 1.41                 | 1.96          | .895 x 2.15 |
| 330                     | 301331T200GT2          | 384.0                 | 177.0                | 1.87                 | 2.59          | .77 x 3.65  |
| 330                     | 301331T200HP2          | 358.0                 | 165.0                | 1.81                 | 2.51          | .895 x 2.65 |
| 390                     | 301391T200HS2          | 288.0                 | 132.0                | 2.20                 | 3.06          | .895 x 3.15 |
| 390                     | 301391T200JL2          | 339.0                 | 156.0                | 1.79                 | 2.49          | 1.02 x 2.15 |
| 470                     | 301471T200HT2          | 240.0                 | 111.0                | 2.57                 | 3.57          | .895 x 3.65 |

| Cap.<br>(µF)            | Catalog<br>Part Number | ESR MAX               |                      | Ripple MAX           |               | Nom Size    |
|-------------------------|------------------------|-----------------------|----------------------|----------------------|---------------|-------------|
|                         |                        | @ 25°C                |                      | @ 85°C               |               | Insulated   |
|                         |                        | 120 Hz 20 kHz<br>(mΩ) | 120 Hz 20 kHz<br>(A) | 120 Hz 20 kHz<br>(A) | D x L<br>(in) |             |
| 470                     | 301471T200JP2          | 255.0                 | 117.0                | 2.30                 | 3.19          | 1.02 x 2.65 |
| 560                     | 301561T200JS2          | 205.0                 | 94.4                 | 2.78                 | 3.87          | 1.02 x 3.15 |
| 680                     | 301681T200JT2          | 172.0                 | 79.1                 | 3.27                 | 4.54          | 1.02 x 3.65 |
| 250 Vdc (300 Vdc Surge) |                        |                       |                      |                      |               |             |
| 8.2                     | 3018R2U250EG2          | 29900.0               | 3050.0               | 0.07                 | 0.23          | .51 x .85   |
| 12                      | 301120U250EK2          | 23300.0               | 2500.0               | 0.09                 | 0.27          | .51 x 1.04  |
| 15                      | 301150U250EM2          | 15000.0               | 1900.0               | 0.14                 | 0.38          | .51 x 1.10  |
| 18                      | 301180U250EN2          | 12100.0               | 1500.0               | 0.17                 | 0.47          | .51 x 1.38  |
| 27                      | 301270U250FK2          | 10800.0               | 1610.0               | 0.20                 | 0.53          | .65 x 1.04  |
| 27                      | 301270U250ER2          | 7820.0                | 1390.0               | 0.28                 | 0.67          | .51 x 1.73  |
| 33                      | 301330U250FF2          | 5500.0                | 720.0                | 0.29                 | 0.80          | .65 x 1.32  |
| 39                      | 301390U250FQ2          | 5260.0                | 700.0                | 0.32                 | 0.89          | .65 x 1.48  |
| 39                      | 301390T250GE2          | 2708.0                | 1137.0               | 0.39                 | 0.57          | .77 x 1.15  |
| 47                      | 301470U250FV2          | 4680.0                | 670.0                | 0.38                 | 1.00          | .65 x 1.65  |
| 56                      | 301560U250LQ2          | 3750.0                | 550.0                | 0.42                 | 1.10          | .73 x 1.48  |
| 68                      | 301680U250LV2          | 3110.0                | 360.0                | 0.44                 | 1.29          | .73 x 1.63  |
| 68                      | 301680T250HE2          | 1684.0                | 707.0                | 0.55                 | 0.79          | .895 x 1.15 |
| 82                      | 301820T250GJ2          | 1355.0                | 569.0                | 0.61                 | 0.89          | .77 x 1.65  |
| 100                     | 301101T250JE2          | 1194.0                | 502.0                | 0.68                 | 0.99          | 1.02 x 1.15 |
| 120                     | 301121T250GL2          | 905.0                 | 380.0                | 0.94                 | 1.37          | .77 x 2.15  |
| 120                     | 301121T250HJ2          | 843.0                 | 354.0                | 0.91                 | 1.33          | .895 x 1.65 |
| 150                     | 301151T250GP2          | 679.0                 | 285.0                | 1.21                 | 1.75          | .77 x 2.65  |
| 180                     | 301181T250JJ2          | 598.0                 | 251.0                | 1.18                 | 1.71          | 1.02 x 1.65 |
| 220                     | 301221T250GS2          | 544.0                 | 229.0                | 1.47                 | 2.14          | .77 x 3.15  |
| 220                     | 301221T250HL2          | 563.0                 | 237.0                | 1.30                 | 1.88          | .895 x 2.15 |
| 270                     | 301271T250GT2          | 455.0                 | 191.0                | 1.72                 | 2.50          | .77 x 3.65  |
| 270                     | 301271T250HP2          | 423.0                 | 178.0                | 1.66                 | 2.42          | .895 x 2.65 |
| 270                     | 301271T250JL2          | 400.0                 | 168.0                | 1.65                 | 2.40          | 1.02 x 2.15 |
| 330                     | 301331T250HS2          | 340.0                 | 143.0                | 2.02                 | 2.94          | .895 x 3.15 |
| 390                     | 301391T250HT2          | 284.0                 | 119.0                | 2.37                 | 3.44          | .895 x 3.65 |
| 390                     | 301391T250JP2          | 301.0                 | 126.0                | 2.12                 | 3.08          | 1.02 x 2.65 |
| 470                     | 301471T250JS2          | 242.0                 | 102.0                | 2.56                 | 3.73          | 1.02 x 3.15 |
| 560                     | 301561T250JT2          | 202.0                 | 85.0                 | 3.01                 | 4.38          | 1.02 x 3.65 |

# Type 300/301 –55 °C to 105 °C Long-Life, Switching Power Grade Radial

## High Capacitance and Ultra-Low ESR

### Typical Performance Curves



# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

## Cornell Dubilier:

[3018R2U250EG1E](#) [301331T250HS1E](#) [301391T250JP1E](#) [301221T200JJ1E](#) [300392U063JP2E](#) [300R681U063HE1](#)  
[301A331T250HS2](#) [301A332U050HP2](#) [300R122U050JE2](#) [300R102U075GL2](#) [NR300R152M040LV1](#)  
[NR301470U250FV1](#) [300R392U050JL2](#) [300R102U063JE2](#) [NR301A122U6R3ER2](#) [NR301A680U250LV1](#)  
[300R331U100JE1](#) [301A331T200GT2E](#) [301A183U020JT2](#)