

CKH/CKE

+105°C General Purpose Radial Lead Aluminum Electrolytic Capacitors



- Standard case sizes
- Multiple case sizes
- Lead free leads
- Bypass
- coupling
- filtering

| | | | | | | | | | | | | | | | |
|---|-----------------------|---|-----|----------------------------------|------|---------------------------------------|------|-----|------------------------|------|-----|-----|-----|-----|-----|
| Operating Temperature Range | | -55°C to +105°C (6.3 to 100 WVDC) -40°C to +105°C (160 to 400 WVDC) -25°C to +105°C (450 WVDC) | | | | | | | | | | | | | |
| Capacitance Tolerance | | +20% at 120 Hz, 20°C | | | | | | | | | | | | | |
| Surge voltage | WVDC | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 100 | 160 | 200 | 250 | 350 | 400 | 450 |
| | SVDC | 7.9 | 13 | 20 | 32 | 44 | 63 | 79 | 125 | 200 | 250 | 300 | 400 | 450 | 500 |
| Dissipation Factor | WVDC | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 100 | 160 | 200 | 250 | 350 | 400 | 450 |
| | tan δ | .24 | .20 | .17 | .15 | .12 | .1 | .1 | .08 | .15 | .15 | .15 | .2 | .2 | .2 |
| | | Add .02 for every 1000uF above 1000uF | | | | | | | | | | | | | |
| Leakage current | | 6.3 to 100 WVDC | | | | | | | 160 to 450 WVDC | | | | | | |
| | | 1 Minutes | | | | 2 Minutes | | | 2 Minutes | | | | | | |
| | | .03CV or 4uA, Whichever is greater | | | | .01CV or 3uA, Whichever is greater | | | .03CV+40uA | | | | | | |
| Low temperature stability Impedance ratio (120 Hz) | Rated WVDC | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 100 | 160 | 200 | 250 | 350 | 400 | 450 |
| | -25°C to +20°C | 4 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 6 | 6 | 15 |
| | -40°C to +20°C | 10 | 8 | 6 | 4 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 10 | 10 | - |
| Load Life | | 2000 hours at 105°C with rated WVDC applied | | | | | | | | | | | | | |
| | | Capacitance change | | <20% of initial measured value | | | | | | | | | | | |
| | | Dissipation factor | | <200% of maximum specified value | | | | | | | | | | | |
| | | Leakage current | | >100% of maximum specified value | | | | | | | | | | | |
| Shelf Life | | 1000 hours at 105°C with no voltage applied | | | | | | | | | | | | | |
| | | Capacitance change | | <20% initial measured value | | | | | | | | | | | |
| | | Dissipation factor | | <200% of maximum specified value | | | | | | | | | | | |
| | | Insulation resistance | | >100% of maximum specified value | | | | | | | | | | | |
| Ripple Current Multipliers | | Frequency (Hz) | | | | Temperature (°C) | | | | | | | | | |
| | | WVDC | 50 | 120 | 1k | 10k+ | +105 | +85 | +70 | +60 | | | | | |
| | | 6.3 to 25V | 0.8 | 1.0 | 1.10 | 1.20 | 1.0 | 1.4 | 1.4 | 1.75 | | | | | |
| | | 35 to 100V | 0.8 | 1.0 | 1.15 | 1.25 | 1.0 | 1.4 | 1.4 | 1.75 | | | | | |
| | | 160 to 250V | 0.8 | 1.0 | 1.25 | 1.40 | 1.0 | 1.4 | 1.4 | 1.75 | | | | | |
| | 350 to 450 V | 0.7 | 1.0 | 1.30 | 1.80 | 1.0 | 1.4 | 1.4 | 1.75 | | | | | | |



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Standard Part Listing

Physical Dimensions

| WVDC uF | 6.3 (7.9) | 10 (13) | 16 (20) | 25 (32) | 35 (44) | 50 (63) | 63 (79) | 100 (125) | 160 (200) | 200 (250) | 250 (300) | 350 (350) | 400 (450) | 450 (500) |
|------------|--------------|------------|-------------------|------------|------------|------------------|--------------------|-----------------------------|------------------|-------------------|-----------------------------|-------------------|-------------------|-----------------------------|
| 0.1 | ----- | ----- | ----- | ----- | -----> | 5x11 | | | | | | | | |
| 0.15 | ----- | ----- | ----- | ----- | -----> | 5x11 | | | | | | | | |
| 0.22 | ----- | ----- | ----- | ----- | -----> | 5x11 | | | | | | | | |
| 0.33 | ----- | ----- | ----- | ----- | -----> | 5x11 | | | | | | | | |
| 0.47 | ----- | ----- | ----- | ----- | ----- | ----- | -----> | 5x11 | ----- | -----> | 6.3x11 | | | |
| 0.68 | ----- | ----- | ----- | ----- | -----> | 5x11 | ----- | ----- | ----- | ----- | ----- | | | |
| 1 | ----- | ----- | ----- | ----- | -----> | 5x11 | -----> | 5x11 | ----- | -----> | 6.3x11 | 6.3x11 | 8x11.5 | 10x12.5 |
| 1.5 | ----- | ----- | ----- | ----- | -----> | 5x11 | ----- | ----- | ----- | ----- | ----- | | | |
| 2.2 | ----- | ----- | ----- | ----- | -----> | 5x11 | -----> | 5x11 | ----- | -----> | 6.3x11 | 6.3x11 | 8x11.5 | 10x12.5 8x11.5 |
| 3.3 | ----- | ----- | ----- | ----- | -----> | 5x11 | -----> | 5x11 | -----> | 6.3x11 | 6.3x11 8x11.5 | 8x11.5 | 10x12.5 8x11.5 | 10x13 12.5x20 |
| 4.7 | ----- | ----- | ----- | ----- | ----- | ----- | -----> | 5x11 | 6.3x11 | 6.3x11 | 10x12.5 6.3x11 8x11.5 | 10x12.5 8x11.5 | 10x12.5 10x16 | 10x12.5 10x20 12.5x20 |
| 6.8 | ----- | ----- | ----- | ----- | -----> | 5x11 | 5x11 | 6.3x11 | ----- | -----> | 10x16 | | | |
| 10 | ----- | ----- | ----- | ----- | -----> | 5x11 | 5x11 | 5x11 6.3x11 | 8x11.5 | 10x12.5 8x11.5 | 10x12.5 10x16 | 10x16 10x20 | 10x16 10x20 | 10x21 12.5x20 |
| 15 | ----- | ----- | ----- | ----- | -----> | 5x11 | 6.3x11 | 8x11.5 | 10x16 | -----> | 10x20 | | | |
| 22 | ----- | ----- | ----- | ----- | -----> | 5x11 | 5x11 6.3x11 | 6.3x11 8x11.5 | 10x12.5 10x16 | 10x16 10x20 | 10x20 12.5x20 | 12.5x20 | 12.5x25 | 13x26 16x25 16x31.5 |
| 33 | ----- | ----- | ----- | ----- | -----> | 5x11 6.3x11 | 6.3x11 | 10x12.5 8x11.5 | 10x16 10x20 | 10x20 | 12.5x20 | 12.5x25 | 16x25 16x31.5 | 16x25 18x35.5 |
| 47 | ----- | ----- | -----> | 5x11 | 5x11 | -----> | 6.3x11 8x11.5 | 10x12.5 10x16 8x11.5 | 10x20 12.5x20 | 12.5x20 | 12.5x25 13x21 | 16x25 16x35.5 | 16x25 16x31.5 | 16x31.5 |
| 68 | ----- | -----> | 5x11 | 6.3x11 | -----> | 8x11.5 | 10x12.5 | 10x16 | -----> | 16x25 | 16x31.5 | | | |
| 100 | ----- | -----> | 5x11 | 5x11 | 6.3x11 | 8x11.5 | 10x12.5 8x11.5 | 10x16 10x20 | 12.5x25 | 16x25 | 16x25 16x31.5 | 18x35.5 18x40 | 18x35.5 | |
| 150 | -----> | 6.3x11 | -----> | 8x11.5 | 10x12.5 | 10x16 | 10x20 | 12.5x20 | 16x31.5 | 16x35.5 | | | | |
| 220 | -----> | 5x11 | 6.3x11 | 6.3x11 | 8x11.5 | 10x12.5 10x16 | 10x16 10x20 | 12.5x20 12.5x25 16x25 | 16x31.5 | 16x35.5 | 18x35.5 | | | |
| 330 | -----> | 6.3x11 | 6.3x11 | 8x11.5 | 10x12.5 | 10x16 10x20 | 10x20 12.5x20 | 12.5x25 16x25 | 18x35.5 | 18x40 | | | | |
| 470 | -----> | 6.3x11 | 10x12.5 8x11.5 | 10x12.5 | 10x16 | 10x20 12.5x20 | 12.5x20 12.5x25 | 16x25 16x31.5 | | | | | | |
| 680 | 10x12.5 | -----> | 10x16 | -----> | 12.5x20 | 12.5x25 | 16x25 | | | | | | | |

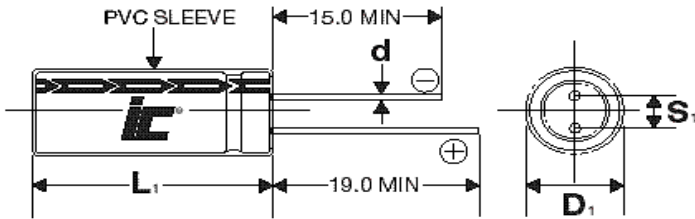


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Capacitor

Standard Part Listing

| WVDC uF | 6.3 (7.9) | 10 (13) | 16 (20) | 25 (32) | 35 (44) | 50 (63) | 63 (79) | 100 (125) | 160 (200) | 200 (250) | 250 (300) | 350 (350) | 400 (450) | 450 (500) |
|------------|--------------------|-------------------------------|-----------------------------|-----------------------------|--------------------|-------------------------------|------------------|------------------|--------------|--------------|--------------|--------------|--------------|--------------|
| 1000 | 8x11.5 | 10x12.5 | 10x12.5 10x16 10x20 | 10x16 10x20 | 12.5x20 | 12.5x25 16x25 | 16x25 16x31.5 | 18x35.5 18x40 | | | | | | |
| 1500 | 10x20 | -----> | 12.5x20 | 12.5x25 | 16x25 | 18x31.5 | | | | | | | | |
| 2200 | 10x16 | 10x16 10x20 | 10x20 12.5x20 12.5x25 | 12.5x25 16x25 | 16x25 16x31.5 | 16x31.5 16x35.5 18x35.5 | 18x35.5 | | | | | | | |
| 3300 | 10x20 | 12.5x20 | 12.5x25 16x25 | 16x25 16x31.5 | 16x31.5 16x35.5 | 18x35.5 | | | | | | | | |
| 4700 | -----> | 12.5x25 16x25 | 16x25 16x31.5 | 16x25 16x31.5 18x31.5 | 16x35.5 18x35.5 | | | | | | | | | |
| 6800 | 12.5x25 | 16x25 | 16x25 16x31.5 | 16x35.5 18x35.5 | 18x40 | | | | | | | | | |
| 10000 | 16x25 16x31.5 | 16x31.5 16x35.5 18x35.5 | 16x35.5 18x31.5 | 18x40 | | | | | | | | | | |
| 15000 | 16x31.5 16x35.5 | 16x35.5 18x35.5 | 18x40 | | | | | | | | | | | |
| 22000 | 18x35.5 | 18x40 | | | | | | | | | | | | |



Lead spacing VS. Case diameter

| D | 5 | 6.3 | 8 | 10 | 12.5 | 16 | 18 |
|---|-----|-----|-----|-----|------|-----|-----|
| S | 2 | 2.5 | 3.5 | 5 | 5 | 7.5 | 7.5 |
| D | 0.5 | 0.5 | 0.6 | 0.6 | 0.6 | 0.8 | 0.8 |

$L_1 = L + 1.5\text{mm Max.}$ mm

$D_1 = D + 0.5\text{mm Max.}$

$S_1 = S + 0.5\text{ mm}$



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Standard Part Listing

| Cap (uF) | VDC | PART # | Maximum ESR Ω 120Hz 20C | Maximum RMS ripple current (mA) 120Hz,105C | DxL (mm) |
|----------|-----|--------------|-----------------------------------|---|----------|
| 0.1 | 50 | 104CKH050M | 1658.7049 | 5 | 5x11 |
| 0.15 | 50 | 154CKH050M | 1105.8033 | 5 | 5x11 |
| 0.22 | 50 | 224CKH050M | 753.9568 | 7 | 5x11 |
| 0.33 | 50 | 334CKH050M | 502.6378 | 10 | 5x11 |
| 0.47 | 100 | 474CKH100M | 282.3327 | 12 | 5x11 |
| 0.47 | 250 | 474CKH250M | 529.3739 | 15 | 6.3x11 |
| 0.68 | 50 | 684CKH050M | 243.9272 | 10 | 5x11 |
| 1 | 50 | 105CKH050M | 165.8705 | 17 | 5x11 |
| 1 | 100 | 105CKE100M | 132.6964 | 19 | 5x11 |
| 1 | 250 | 105CKE250M | 248.8057 | 21 | 6.3x11 |
| 1 | 350 | 105CKE350M | 331.7410 | 21 | 6.3x11 |
| 1 | 400 | 105CKE400M | 331.7410 | 21 | 8x11.5 |
| 1 | 450 | 105CKE450M | 331.7410 | 22 | 10x12.5 |
| 1.5 | 50 | 155CKH050M | 110.5803 | 15 | 5x11 |
| 2.2 | 50 | 225CKH050M | 75.3957 | 25 | 5x11 |
| 2.2 | 100 | 225CKE100M | 60.3165 | 28 | 5x11 |
| 2.2 | 250 | 225CKH250M | 113.0935 | 31 | 6.3x11 |
| 2.2 | 350 | 225CKE350M | 150.7914 | 21 | 6.3x11 |
| 2.2 | 400 | 225CKE400M | 150.7914 | 26 | 8x11.5 |
| 2.2 | 450 | 225CKH450M | 150.7914 | 39 | 10x20 |
| 2.2 | 450 | 225CKE450MJM | 150.7914 | 20 | 8x11.5 |
| 3.3 | 50 | 335CKE050M | 50.2638 | 31 | 5x11 |
| 3.3 | 100 | 335CKE100M | 40.2110 | 34 | 5x11 |
| 3.3 | 200 | 335CKE200M | 75.3957 | 34 | 6.3x11 |
| 3.3 | 250 | 335CKE250MGM | 75.3957 | 28 | 6.3x11 |
| 3.3 | 250 | 335CKE250M | 75.3957 | 44 | 8x11.5 |
| 3.3 | 350 | 335CKE350MJM | 100.5276 | 30 | 8x11.5 |
| 3.3 | 400 | 335CKE400M | 100.5276 | 41 | 10x12.5 |
| 3.3 | 400 | 335CKE400MJM | 100.5276 | 34 | 8x11.5 |
| 3.3 | 450 | 335CKE450MLN | 100.5276 | 28 | 10x13 |
| 3.3 | 450 | 335CKE450M | 100.5276 | 50 | 12.5x20 |
| 4.7 | 100 | 475CKE100M | 28.2333 | 41 | 5x11 |
| 4.7 | 160 | 475CKE160M | 52.9374 | 38 | 6.3x11 |
| 4.7 | 200 | 475CKE200M | 52.9374 | 35 | 6.3x11 |
| 4.7 | 250 | 475CKH250M | 52.9374 | 60 | 10x12.5 |
| 4.7 | 250 | 475CKE250MGM | 52.9374 | 35 | 6.3x11 |
| 4.7 | 250 | 475CKE250M | 52.9374 | 50 | 8x11.5 |
| 4.7 | 350 | 475CKE350M | 70.5832 | 47 | 10x12.5 |
| 4.7 | 350 | 475CKE350MJM | 70.5832 | 39 | 8x11.5 |
| 4.7 | 400 | 475CKE400MLN | 70.5832 | 42 | 10x12.5 |

| Cap (uF) | VDC | PART # | Maximum ESR Ω 120Hz 20C | Maximum RMS ripple current (mA) 120Hz,105C | DxL (mm) |
|----------|-----|--------------|-----------------------------------|---|----------|
| 4.7 | 400 | 475CKE400M | 70.5832 | 55 | 10x16 |
| 4.7 | 450 | 475CKE450MLN | 70.5832 | 32 | 10x12.5 |
| 4.7 | 450 | 475CKE450M | 70.5832 | 43 | 10x20 |
| 4.7 | 450 | 475CKH450M | 70.5832 | 60 | 12.5x20 |
| 6.8 | 50 | 685CKH050M | 24.3927 | 40 | 5x11 |
| 6.8 | 63 | 685CKH063M | 24.3927 | 42 | 5x11 |
| 6.8 | 100 | 685CKH100M | 19.5142 | 52 | 6.3x11 |
| 6.8 | 250 | 685CKH250M | 36.5891 | 65 | 10x16 |
| 10 | 50 | 106CKH050M | 16.5870 | 55 | 5x11 |
| 10 | 63 | 106CKE063M | 16.5870 | 55 | 5x11 |
| 10 | 100 | 106CKE100MEM | 13.2696 | 50 | 5x11 |
| 10 | 100 | 106CKH100M | 13.2696 | 65 | 6.3x11 |
| 10 | 160 | 106CKE160M | 24.8806 | 65 | 8x11.5 |
| 10 | 200 | 106CKE200M | 24.8806 | 75 | 10x12.5 |
| 10 | 200 | 106CKE200MJM | 24.8806 | 57 | 8x11.5 |
| 10 | 250 | 106CKE250MLN | 24.8806 | 71 | 10x12.5 |
| 10 | 250 | 106CKH250M | 24.8806 | 90 | 10x16 |
| 10 | 350 | 106CKE350MLQ | 33.1741 | 64 | 10x16 |
| 10 | 350 | 106CKE350M | 33.1741 | 85 | 10x20 |
| 10 | 400 | 106CKE400MLQ | 33.1741 | 64 | 10x16 |
| 10 | 400 | 106CKE400M | 33.1741 | 73 | 10x20 |
| 10 | 450 | 106CKE450MLU | 33.1741 | 27 | 10x21 |
| 10 | 450 | 106CKE450M | 33.1741 | 65 | 12.5x20 |
| 15 | 50 | 156CKH050M | 11.0580 | 58 | 5x11 |
| 15 | 63 | 156CKH063M | 11.0580 | 65 | 6.3x11 |
| 15 | 100 | 156CKH100M | 8.8464 | 80 | 8x11.5 |
| 15 | 160 | 156CKH160M | 16.5870 | 80 | 10x16 |
| 15 | 250 | 156CKH250M | 16.5870 | 90 | 10x20 |
| 22 | 50 | 226CKH050M | 7.5396 | 80 | 5x11 |
| 22 | 63 | 226CKE063M | 7.5396 | 80 | 5x11 |
| 22 | 63 | 226CKH063M | 7.5396 | 85 | 6.3x11 |
| 22 | 100 | 226CKE100M | 6.0317 | 100 | 6.3x11 |
| 22 | 100 | 226CKH100M | 6.0317 | 110 | 8x11.5 |
| 22 | 160 | 226CKE160MLN | 11.3094 | 92 | 10x12.5 |
| 22 | 160 | 226CKE160M | 11.3094 | 110 | 10x16 |
| 22 | 200 | 226CKE200MLQ | 11.3094 | 105 | 10x16 |
| 22 | 200 | 226CKH200M | 11.3094 | 130 | 10x20 |
| 22 | 250 | 226CKE250MLU | 11.3094 | 105 | 10x20 |
| 22 | 250 | 226CKE250M | 11.3094 | 160 | 12.5x20 |
| 22 | 350 | 226CKE350MNU | 15.0791 | 105 | 12.5x20 |



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+105°C Radial lead
General Purpose
Aluminum Electrolytic
Capacitor

Standard Part Listing

| Cap (uF) | VDC | PART # | Maximum ESR Ω 120Hz 20C | Maximum RMS ripple current (mA) 120Hz,105C | DxL (mm) |
|----------|-----|--------------|--------------------------------|--|----------|
| 22 | 400 | 226CKE400M | 15.0791 | 150 | 12.5x25 |
| 22 | 450 | 226CKE450MNV | 15.0791 | 100 | 13x26 |
| 22 | 450 | 226CKE450M | 15.0791 | 130 | 16x25 |
| 22 | 450 | 226CKH450M | 15.0791 | 160 | 16x31.5 |
| 33 | 50 | 336CKE050M | 5.0264 | 95 | 5x11 |
| 33 | 63 | 336CKE063M | 5.0264 | 110 | 6.3x11 |
| 33 | 100 | 336CKH100M | 4.0211 | 140 | 10x12.5 |
| 33 | 100 | 336CKE100M | 4.0211 | 140 | 8x11.5 |
| 33 | 160 | 336CKE160MLQ | 7.5396 | 125 | 10x16 |
| 33 | 160 | 336CKE160M | 7.5396 | 150 | 10x20 |
| 33 | 200 | 336CKE200MLU | 7.5396 | 140 | 10x20 |
| 33 | 250 | 336CKE250M | 7.5396 | 190 | 12.5x20 |
| 33 | 350 | 336CKE350MNV | 10.0528 | 170 | 12.5x25 |
| 33 | 400 | 336CKE400M | 10.0528 | 160 | 16x25 |
| 33 | 400 | 336CKH400M | 10.0528 | 210 | 16x31.5 |
| 33 | 450 | 336CKE450MQV | 10.0528 | 120 | 16x25 |
| 33 | 450 | 336CKE450M | 10.0528 | 230 | 18x35.5 |
| 47 | 25 | 476CKH025M | 5.2937 | 95 | 5x11 |
| 47 | 35 | 476CKE035M | 4.2350 | 110 | 5x11 |
| 47 | 50 | 476CKE050M | 3.5292 | 130 | 6.3x11 |
| 47 | 63 | 476CKE063M | 3.5292 | 130 | 6.3x11 |
| 47 | 63 | 476CKH063M | 3.5292 | 135 | 8x11.5 |
| 47 | 100 | 476CKE100M | 2.8233 | 180 | 10x12.5 |
| 47 | 100 | 476CKH100M | 2.8233 | 190 | 10x16 |
| 47 | 100 | 476CKE100MJM | 2.8233 | 140 | 8x11.5 |
| 47 | 160 | 476CKE160MLU | 5.2937 | 150 | 10x20 |
| 47 | 160 | 476CKE160M | 5.2937 | 190 | 12.5x20 |
| 47 | 200 | 476CKE200M | 5.2937 | 210 | 12.5x20 |
| 47 | 250 | 476CKE250M | 5.2937 | 250 | 12.5x25 |
| 47 | 250 | 476CKE250MNU | 5.2937 | 190 | 13x21 |
| 47 | 350 | 476CKE350M | 7.0583 | 190 | 16x25 |
| 47 | 350 | 476CKH350M | 7.0583 | 250 | 16x35.5 |
| 47 | 400 | 476CKE400MQV | 7.0583 | 200 | 16x25 |
| 47 | 400 | 476CKE400M | 7.0583 | 210 | 16x31.5 |
| 47 | 450 | 476CKE450MQW | 7.0583 | 155 | 16x31.5 |
| 68 | 16 | 686CKH016M | 4.1468 | 95 | 5x11 |
| 68 | 25 | 686CKH025M | 3.6589 | 105 | 6.3x11 |
| 68 | 50 | 686CKH050M | 2.4393 | 165 | 8x11.5 |
| 68 | 63 | 686CKH063M | 2.4393 | 190 | 10x12.5 |
| 68 | 100 | 686CKH100M | 1.9514 | 255 | 10x16 |

| Cap (uF) | VDC | PART # | Maximum ESR Ω 120Hz 20C | Maximum RMS ripple current (mA) 120Hz,105C | DxL (mm) |
|----------|-----|--------------|--------------------------------|--|----------|
| 68 | 200 | 686CKH200M | 3.6589 | 235 | 16x25 |
| 68 | 250 | 686CKH250M | 3.6589 | 255 | 16x31.5 |
| 100 | 16 | 107CKE016M | 2.8198 | 130 | 5x11 |
| 100 | 25 | 107CKE025MEM | 2.4881 | 125 | 5x11 |
| 100 | 35 | 107CKE035M | 1.9904 | 170 | 6.3x11 |
| 100 | 50 | 107CKH050M | 1.6587 | 220 | 8x11.5 |
| 100 | 63 | 107CKH063M | 1.6587 | 240 | 10x12.5 |
| 100 | 63 | 107CKE063MJM | 1.6587 | 200 | 8x11.5 |
| 100 | 100 | 107CKE100MLQ | 1.3270 | 240 | 10x16 |
| 100 | 100 | 107CKE100M | 1.3270 | 320 | 10x20 |
| 100 | 160 | 107CKE160M | 2.4881 | 310 | 12.5x25 |
| 100 | 200 | 107CKE200M | 2.4881 | 340 | 16x25 |
| 100 | 250 | 107CKE250MQV | 2.4881 | 310 | 16x25 |
| 100 | 250 | 107CKE250M | 2.4881 | 410 | 16x31.5 |
| 100 | 350 | 107CKE350MRY | 3.3174 | 370 | 18x35.5 |
| 100 | 350 | 107CKE350M | 3.3174 | 410 | 18x40 |
| 100 | 400 | 107CKE400M | 3.3174 | 310 | 18x35.5 |
| 150 | 10 | 157CKH010M | 2.2116 | 125 | 6.3x11 |
| 150 | 25 | 157CKH025M | 1.6587 | 180 | 8x11.5 |
| 150 | 35 | 157CKH035M | 1.3270 | 230 | 10x12.5 |
| 150 | 50 | 157CKH050M | 1.1058 | 260 | 10x16 |
| 150 | 63 | 157CKH063M | 1.1058 | 315 | 10x20 |
| 150 | 100 | 157CKH100M | 0.8846 | 410 | 12.5x20 |
| 150 | 160 | 157CKH160M | 1.6587 | 330 | 16x31.5 |
| 150 | 200 | 157CKH200M | 1.6587 | 350 | 16x35.5 |
| 220 | 10 | 227CKE010M | 1.5079 | 180 | 5x11 |
| 220 | 16 | 227CKE016M | 1.2817 | 220 | 6.3x11 |
| 220 | 25 | 227CKE025MGM | 1.1309 | 200 | 6.3x11 |
| 220 | 35 | 227CKE035M | 0.9047 | 300 | 8x11.5 |
| 220 | 50 | 227CKE050M | 0.7540 | 350 | 10x12.5 |
| 220 | 50 | 227CKH050M | 0.7540 | 360 | 10x16 |
| 220 | 63 | 227CKE063M | 0.7540 | 390 | 10x16 |
| 220 | 63 | 227CKH063M | 0.7540 | 400 | 10x20 |
| 220 | 100 | 227CKE100MNU | 0.6032 | 390 | 12.5x20 |
| 220 | 100 | 227CKE100M | 0.6032 | 560 | 12.5x25 |
| 220 | 100 | 227CKH100M | 0.6032 | 540 | 16x25 |
| 220 | 160 | 227CKE160MQW | 1.1309 | 410 | 16x31.5 |
| 220 | 200 | 227CKE200M | 1.1309 | 500 | 16x35.5 |
| 220 | 250 | 227CKE250M | 1.1309 | 485 | 18x35.5 |
| 330 | 10 | 337CKE010M | 1.0053 | 250 | 6.3x11 |



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+105°C Radial lead
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Capacitor

Standard Part Listing

| Cap (uF) | VDC | PART # | Maximum ESR Ω 120Hz 20C | Maximum RMS ripple current (mA) 120Hz,105C | DxL (mm) |
|----------|-----|--------------|--------------------------------|--|----------|
| 330 | 16 | 337CKE016MGM | 0.8545 | 225 | 6.3x11 |
| 330 | 25 | 337CKE025M | 0.7540 | 330 | 8x11.5 |
| 330 | 35 | 337CKE035M | 0.6032 | 390 | 10x12.5 |
| 330 | 50 | 337CKE050M | 0.5026 | 480 | 10x16 |
| 330 | 50 | 337CKH050M | 0.5026 | 490 | 10x20 |
| 330 | 63 | 337CKE063M | 0.5026 | 520 | 10x20 |
| 330 | 63 | 337CKH063M | 0.5026 | 530 | 12.5x20 |
| 330 | 100 | 337CKE100M | 0.4021 | 690 | 12.5x25 |
| 330 | 100 | 337CKH100M | 0.4021 | 660 | 16x25 |
| 330 | 160 | 337CKE160M | 0.7540 | 550 | 18x35.5 |
| 330 | 200 | 337CKE200M | 0.7540 | 675 | 18x40 |
| 470 | 10 | 477CKE010M | 0.7058 | 290 | 6.3x11 |
| 470 | 16 | 477CKH016M | 0.6000 | 370 | 10x12.5 |
| 470 | 16 | 477CKE016M | 0.6000 | 370 | 8x11.5 |
| 470 | 25 | 477CKE025M | 0.5294 | 420 | 10x12.5 |
| 470 | 35 | 477CKE035M | 0.4235 | 520 | 10x16 |
| 470 | 50 | 477CKE050M | 0.3529 | 630 | 10x20 |
| 470 | 50 | 477CKH050M | 0.3529 | 630 | 12.5x20 |
| 470 | 63 | 477CKE063M | 0.3529 | 670 | 12.5x20 |
| 470 | 63 | 477CKH063M | 0.3529 | 690 | 12.5x25 |
| 470 | 100 | 477CKE100M | 0.2823 | 830 | 16x25 |
| 470 | 100 | 477CKH100M | 0.2823 | 870 | 16x31.5 |
| 680 | 6.3 | 687CKH6R3M | 0.5854 | 375 | 10x12.5 |
| 680 | 16 | 687CKH016M | 0.4147 | 490 | 10x16 |
| 680 | 35 | 687CKH035M | 0.2927 | 695 | 12.5x20 |
| 680 | 50 | 687CKH050M | 0.2439 | 825 | 12.5x25 |
| 680 | 63 | 687CKH063M | 0.2439 | 925 | 16x25 |
| 1000 | 6.3 | 108CKE6R3M | 0.3981 | 460 | 8x11.5 |
| 1000 | 10 | 108CKE010M | 0.3317 | 530 | 10x12.5 |
| 1000 | 16 | 108CKE016MLN | 0.2820 | 500 | 10x12.5 |
| 1000 | 16 | 108CKE016M | 0.2820 | 630 | 10x16 |
| 1000 | 16 | 108CKH016M | 0.2820 | 660 | 10x20 |
| 1000 | 25 | 108CKE025MLQ | 0.2488 | 610 | 10x16 |
| 1000 | 25 | 108CKE025M | 0.2488 | 740 | 10x20 |
| 1000 | 35 | 108CKH035M | 0.1990 | 890 | 12.5x20 |
| 1000 | 50 | 108CKE050M | 0.1659 | 1070 | 12.5x25 |
| 1000 | 50 | 108CKH050M | 0.1659 | 1010 | 16x25 |
| 1000 | 63 | 108CKE063M | 0.1659 | 1080 | 16x25 |
| 1000 | 63 | 108CKH063M | 0.1659 | 1120 | 16x31.5 |
| 1000 | 100 | 108CKE100MRY | 0.1327 | 1000 | 18x35.5 |

| Cap (uF) | VDC | PART # | Maximum ESR Ω 120Hz 20C | Maximum RMS ripple current (mA) 120Hz,105C | DxL (mm) |
|----------|-----|--------------|--------------------------------|--|----------|
| 1000 | 100 | 108CKE100M | 0.1327 | 1580 | 18x40 |
| 1500 | 6.3 | 158CKH6R3M | 0.2875 | 585 | 10x20 |
| 1500 | 16 | 158CKH016M | 0.2101 | 800 | 12.5x20 |
| 1500 | 25 | 158CKH025M | 0.1880 | 905 | 12.5x25 |
| 1500 | 35 | 158CKH035M | 0.1548 | 1140 | 16x25 |
| 1500 | 50 | 158CKH050M | 0.1327 | 1250 | 18x31.5 |
| 2200 | 6.3 | 228CKE6R3M | 0.2111 | 760 | 10x16 |
| 2200 | 10 | 228CKE010MLQ | 0.1809 | 705 | 10x16 |
| 2200 | 10 | 228CKE010M | 0.1809 | 910 | 10x20 |
| 2200 | 16 | 228CKE016MLU | 0.1583 | 710 | 10x20 |
| 2200 | 16 | 228CKE016M | 0.1583 | 1050 | 12.5x20 |
| 2200 | 16 | 228CKH016M | 0.1583 | 1090 | 12.5x25 |
| 2200 | 25 | 228CKE025M | 0.1433 | 1220 | 12.5x25 |
| 2200 | 25 | 228CKH025M | 0.1433 | 1210 | 16x25 |
| 2200 | 35 | 228CKE035M | 0.1206 | 1350 | 16x25 |
| 2200 | 35 | 228CKH035M | 0.1206 | 1440 | 16x31.5 |
| 2200 | 50 | 228CKE050MQW | 0.1056 | 1410 | 16x31.5 |
| 2200 | 50 | 228CKE050M | 0.1056 | 1700 | 16x35.5 |
| 2200 | 50 | 228CKH050M | 0.1056 | 1700 | 18x35.5 |
| 2200 | 63 | 228CKE063M | 0.1056 | 1650 | 18x35.5 |
| 3300 | 6.3 | 338CKE6R3M | 0.1508 | 990 | 10x20 |
| 3300 | 10 | 338CKE010M | 0.1307 | 1140 | 12.5x20 |
| 3300 | 16 | 338CKE016M | 0.1156 | 1340 | 12.5x25 |
| 3300 | 16 | 338CKH016M | 0.1156 | 1270 | 16x25 |
| 3300 | 25 | 338CKE025M | 0.1056 | 1420 | 16x25 |
| 3300 | 25 | 338CKH025M | 0.1056 | 1530 | 16x31.5 |
| 3300 | 35 | 338CKE035MQW | 0.0905 | 1500 | 16x31.5 |
| 3300 | 35 | 338CKE035M | 0.0905 | 1810 | 16x35.5 |
| 3300 | 50 | 338CKE050M | 0.0804 | 2060 | 18x35.5 |
| 4700 | 10 | 478CKE010M | 0.0847 | 1420 | 12.5x25 |
| 4700 | 10 | 478CKH010M | 0.0988 | 1350 | 16x25 |
| 4700 | 16 | 478CKE016M | 0.0741 | 1510 | 16x25 |
| 4700 | 16 | 478CKH016M | 0.0882 | 1560 | 16x31.5 |
| 4700 | 25 | 478CKE025MQV | 0.0812 | 1570 | 16x25 |
| 4700 | 25 | 478CKE025M | 0.0812 | 1740 | 16x31.5 |
| 4700 | 25 | 478CKH025M | 0.0812 | 1780 | 18x31.5 |
| 4700 | 35 | 478CKE035MQY | 0.0706 | 1780 | 16x35.5 |
| 4700 | 35 | 478CKE035M | 0.0706 | 2110 | 18x35.5 |
| 6800 | 6.3 | 688CKE6R3M | 0.0585 | 1500 | 12.5x25 |
| 6800 | 10 | 688CKE010M | 0.0488 | 1600 | 16x25 |



CKH/CKE

+105°C Radial lead
General Purpose
Aluminum Electrolytic
Capacitor

Standard Part Listing

| Cap (uF) | VDC | PART # | Maximum ESR Ω 120Hz 20C | Maximum RMS ripple current (mA) 120Hz,105C | DxL (mm) |
|----------|-----|--------------|--------------------------------|--|----------|
| 6800 | 16 | 688CKE016MQV | 0.0707 | 1600 | 16x25 |
| 6800 | 16 | 688CKE016M | 0.0707 | 1860 | 16x31.5 |
| 6800 | 25 | 688CKE025MQY | 0.0659 | 1850 | 16x35.5 |
| 6800 | 25 | 688CKE025M | 0.0659 | 2170 | 18x35.5 |
| 6800 | 35 | 688CKE035M | 0.0585 | 2000 | 18x40 |
| 10000 | 6.3 | 109CKE6R3M | 0.0398 | 1660 | 16x25 |
| 10000 | 6.3 | 109CKH6R3M | 0.0697 | 1730 | 16x31.5 |
| 10000 | 10 | 109CKE010MQW | 0.0630 | 1820 | 16x31.5 |
| 10000 | 10 | 109CKE010M | 0.0630 | 2040 | 16x35.5 |
| 10000 | 10 | 109CKH010M | 0.0630 | 2030 | 18x35.5 |

| Cap (uF) | VDC | PART # | Maximum ESR Ω 120Hz 20C | Maximum RMS ripple current (mA) 120Hz,105C | DxL (mm) |
|----------|-----|--------------|--------------------------------|--|----------|
| 10000 | 16 | 109CKE016MQY | 0.0581 | 1930 | 16x35.5 |
| 10000 | 16 | 109CKE016M | 0.0581 | 1960 | 18x31.5 |
| 10000 | 25 | 109CKE025M | 0.0547 | 2000 | 18x40 |
| 15000 | 6.3 | 159CKE6R3MQW | 0.0575 | 1820 | 16x31.5 |
| 15000 | 6.3 | 159CKE6R3M | 0.0575 | 2140 | 16x35.5 |
| 15000 | 10 | 159CKE010MQY | 0.0531 | 2050 | 16x35.5 |
| 15000 | 10 | 159CKE010M | 0.0531 | 2370 | 18x35.5 |
| 15000 | 16 | 159CKE016M | 0.0498 | 2210 | 18x40 |
| 22000 | 6.3 | 229CKE6R3MRY | 0.0498 | 2280 | 18x35.5 |
| 22000 | 10 | 229CKE010M | 0.0467 | 2420 | 18x40 |

