

ALC10 Series 85°C

RoHS
Compliant

- Compact size
- Long Life, 18000 hours at 85°C (U_r, I_r applied)
- High ripple current
- Excellent surge voltage capability
- Optimized designs available on request

APPLICATION

They are ideally suited for industrial and commercial applications demanding high reliability and long life expectancy such as frequency converters, UPS systems and switch mode power supplies.

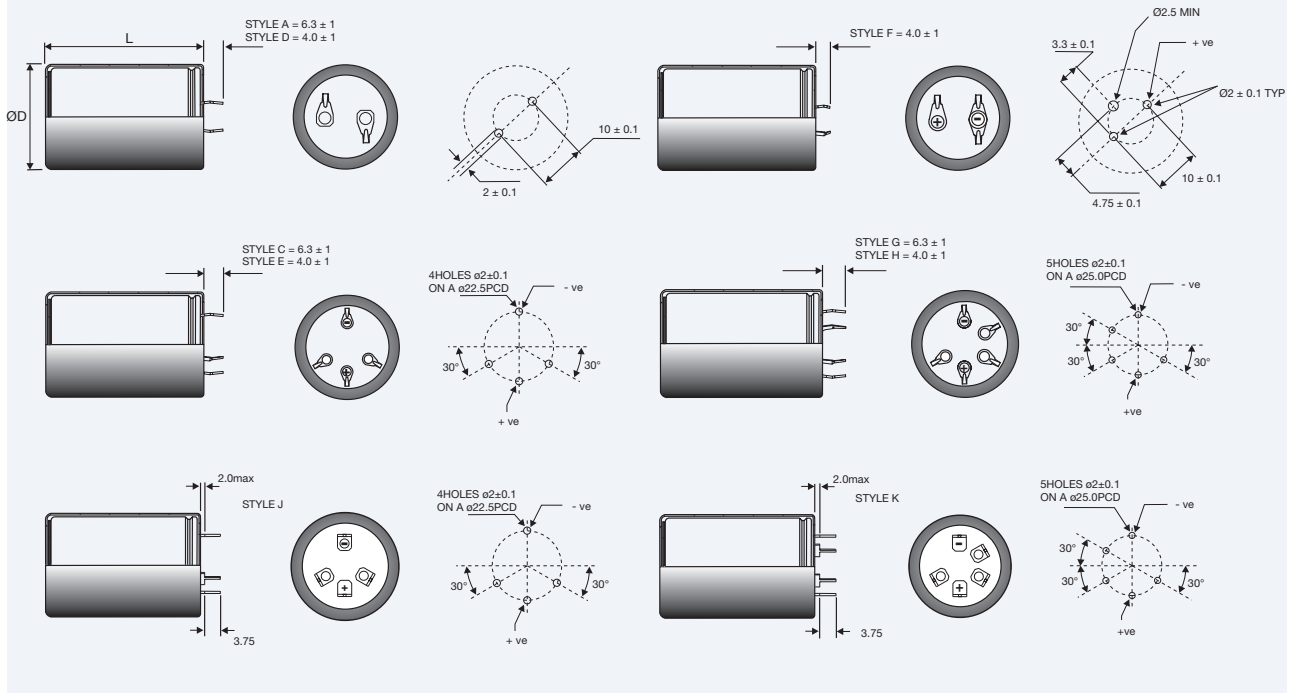
BASIC DESIGN

The ALC10 series of snap-in capacitors cover a wide range of case sizes and voltage ratings featuring high ripple current and surge voltage capability and very long life performance.

SPECIFICATION

| Standards | IEC 60384-4 Long Life Grade 40/85/56, | | | | | | | | | | | | | | | | | |
|--|---|--|-----------------|-----|-------|-----|-------|-----|-------|------------|-------|--|-----|-----|-----|-----|-----|---|
| Capacitance range | 56 – 82000 µF | | | | | | | | | | | | | | | | | |
| Capacitance tolerance | -20 to +20% | | | | | | | | | | | | | | | | | |
| Rated voltage U_R | 40–500 VDC | | | | | | | | | | | | | | | | | |
| Surge voltage U_S | 1.15 x U _R (for U _R ≤ 250 VDC) 1.10 x U _R (for U _R ≥ 350 VDC) | Test Condition: ≤ 30s surge, 1000 cycles @ 85°C | | | | | | | | | | | | | | | | |
| Surge voltage U_{SS} (Short duration) | <table border="1"> <thead> <tr> <th>U_R</th> <th>U_{SS}</th> </tr> </thead> <tbody> <tr><td>200</td><td>350</td></tr> <tr><td>250</td><td>400</td></tr> <tr><td>350</td><td>500</td></tr> <tr><td>400</td><td>520</td></tr> <tr><td>415</td><td>530</td></tr> <tr><td>450</td><td>550</td></tr> <tr><td>500</td><td>600</td></tr> </tbody> </table> | U _R | U _{SS} | 200 | 350 | 250 | 400 | 350 | 500 | 400 | 520 | 415 | 530 | 450 | 550 | 500 | 600 | Test Condition: ≤ 500ms surge, 100 cycles @ 20°C |
| U _R | U _{SS} | | | | | | | | | | | | | | | | | |
| 200 | 350 | | | | | | | | | | | | | | | | | |
| 250 | 400 | | | | | | | | | | | | | | | | | |
| 350 | 500 | | | | | | | | | | | | | | | | | |
| 400 | 520 | | | | | | | | | | | | | | | | | |
| 415 | 530 | | | | | | | | | | | | | | | | | |
| 450 | 550 | | | | | | | | | | | | | | | | | |
| 500 | 600 | | | | | | | | | | | | | | | | | |
| Leakage current I_L | = 0.006 x C _R x U _R (µA) or 6mA whichever is the smaller. Note, C _R is in µF. | Test Condition: U _R , 5mins., 20°C | | | | | | | | | | | | | | | | |
| Operational life time +85°C, U_R, I_R | <table border="1"> <thead> <tr> <th>Can Diameter</th> <th>Life (hrs)</th> </tr> </thead> <tbody> <tr><td>25</td><td>10000</td></tr> <tr><td>30</td><td>13000</td></tr> <tr><td>35</td><td>15000</td></tr> <tr><td>40, 45, 50</td><td>18000</td></tr> </tbody> </table> | Can Diameter | Life (hrs) | 25 | 10000 | 30 | 13000 | 35 | 15000 | 40, 45, 50 | 18000 | End of Life requirement: ΔC/C ≤ ±10% ESR ≤ 2 x initial ESR value I _L ≤ initial specified limit | | | | | | |
| Can Diameter | Life (hrs) | | | | | | | | | | | | | | | | | |
| 25 | 10000 | | | | | | | | | | | | | | | | | |
| 30 | 13000 | | | | | | | | | | | | | | | | | |
| 35 | 15000 | | | | | | | | | | | | | | | | | |
| 40, 45, 50 | 18000 | | | | | | | | | | | | | | | | | |
| +85°C, U_R | <table border="1"> <thead> <tr> <th>Can Diameter</th> <th>Life (hrs)</th> </tr> </thead> <tbody> <tr><td>25</td><td>16000</td></tr> <tr><td>30</td><td>21000</td></tr> <tr><td>35</td><td>24000</td></tr> <tr><td>40, 45, 50</td><td>29000</td></tr> </tbody> </table> | Can Diameter | Life (hrs) | 25 | 16000 | 30 | 21000 | 35 | 24000 | 40, 45, 50 | 29000 | | | | | | | |
| Can Diameter | Life (hrs) | | | | | | | | | | | | | | | | | |
| 25 | 16000 | | | | | | | | | | | | | | | | | |
| 30 | 21000 | | | | | | | | | | | | | | | | | |
| 35 | 24000 | | | | | | | | | | | | | | | | | |
| 40, 45, 50 | 29000 | | | | | | | | | | | | | | | | | |
| Shelf Life | 2000 hrs at 0V +85°C, or 30000 hrs at 0V +40°C | | | | | | | | | | | | | | | | | |
| Temperature range | -40 to +85°C (Operating) -55°C to +85°C (Storage) | | | | | | | | | | | | | | | | | |

SPECIFICATION



Mounting

These capacitors are designed to be mounted by their terminations alone, and may be used in any position. Dummy pins must be isolated on 4 and 5 pin styles.

Terminal Style

| Description | 2 pin | 2 pin | 3 pin | 4 pin | 4 pin | 5 pin | 5 pin | 4 pin | 5 pin |
|--------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Pin length | 6.3±1 | 4.0±1 | 4.0±1 | 6.3±1 | 4.0±1 | 6.3±1 | 4.0±1 | 5.75 | 5.75 |
| Code | A | D | F | C | E | G | H | J | K |
| DIA. mm -0+1 | | | | | | | | | |
| 25 | • | • | • | | | | | | |
| 30 | • | • | • | | | | | | |
| 35 | • | • | • | • | • | | | • | |
| 40 | • | • | • | • | • | • | • | | • |
| 45 | | | | • | • | • | • | | |
| 50 | | | | • | • | • | • | | • |

Case Code (Component weight, grams - nominal)

| Length mm ±2 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 80 | 105 |
|--------------|---------|---------|----------|----------|----------|----------|----------|----------|----------|
| Dia. mm -0+1 | | | | | | | | | |
| 25 | BB (28) | BC (30) | BD (35) | | | | | | |
| 30 | CB (35) | CC (40) | CD (45) | CE (50) | CF (55) | | | | |
| 35 | DB (42) | DC (50) | DD (55) | DE (65) | DF (70) | DG (75) | DH (80) | DL (105) | |
| 40 | EB (49) | EC (57) | ED (65) | EE (80) | EF (82) | EG (95) | EH (98) | EL (131) | EP (170) |
| 45 | FB (62) | FC (72) | FD (82) | FE (92) | FF (103) | FG (113) | FH (123) | FL (164) | FP (215) |
| 50 | KB (75) | KC (88) | KD (100) | KE (113) | KF (126) | KG (138) | KH (151) | KL (201) | KP (264) |

Other sizes available upon request

ARTICLE TABLE ALC10 (85°C)

| Cap (μ F) | Case Size (mm) | ESR ($m\Omega$) at 20°C 100Hz (max) | Impedance ($m\Omega$) at 20°C 10 KHz (max) | Ripple current(A) at 85°C | | Type number |
|-----------------------------------|----------------------|---|--|------------------------------|--------|----------------|
| | | | | 100 Hz | 10 KHz | |
| 40 VDC (U_R) | | | | | | |
| 3900 | 25x30 | 125 | 103 | 2.33 | 2.53 | ALC10A392BB040 |
| 4700 | 25x35 | 99 | 81 | 2.77 | 3.01 | ALC10A472BC040 |
| 5600 | 30x30 | 115 | 94 | 2.74 | 2.98 | ALC10A562CB040 |
| 5600 | 25x40 | 85 | 70 | 3.14 | 3.42 | ALC10A562BD040 |
| 6800 | 30x35 | 90 | 74 | 3.26 | 3.55 | ALC10A682CC040 |
| 8200 | 30x40 | 77 | 63 | 3.70 | 4.03 | ALC10A822CD040 |
| 10000 | 35x35 | 86 | 71 | 3.69 | 4.01 | ALC10A103DC040 |
| 12000 | 30x50 | 59 | 48 | 4.59 | 4.99 | ALC10A123CF040 |
| 12000 | 35x40 | 75 | 62 | 4.14 | 4.50 | ALC10A123DD040 |
| 15000 | 40x30 | 89 | 79 | 4.42 | 4.51 | ALC10A153EB040 |
| 18000 | 35x50 | 55 | 45 | 5.23 | 5.69 | ALC10A183DF040 |
| 18000 | 40x35 | 78 | 70 | 4.88 | 4.97 | ALC10A183EC040 |
| 22000 | 40x40 | 62 | 56 | 5.81 | 5.92 | ALC10A223ED040 |
| 27000 | 40x50 | 43 | 38 | 7.23 | 7.36 | ALC10A273EF040 |
| 33000 | 40x60 | 33 | 30 | 8.74 | 8.91 | ALC10A333EH040 |
| 47000 | 40x80 | 23 | 21 | 10.96 | 11.17 | ALC10A473EL040 |
| 82000 | 40x105 | 18 | 17 | 12.63 | 13.44 | ALC10A823EP040 |
| 63 VDC (U_R) | | | | | | |
| 2200 | 25x30 | 149 | 118 | 2.13 | 2.37 | ALC10A222BB063 |
| 2700 | 25x35 | 128 | 101 | 2.43 | 2.70 | ALC10A272BC063 |
| 3300 | 30x30 | 112 | 88 | 2.77 | 3.08 | ALC10A332CB063 |
| 3300 | 25x40 | 112 | 88 | 2.73 | 3.04 | ALC10A332BD063 |
| 4700 | 30x35 | 91 | 72 | 3.24 | 3.61 | ALC10A472CC063 |
| 5600 | 30x40 | 83 | 66 | 3.56 | 3.96 | ALC10A562CD063 |
| 6800 | 35x35 | 75 | 59 | 3.95 | 4.40 | ALC10A682DC063 |
| 6800 | 30x50 | 75 | 59 | 4.07 | 4.53 | ALC10A682CF063 |
| 8200 | 35x40 | 69 | 55 | 4.31 | 4.80 | ALC10A822DD063 |
| 8200 | 40x30 | 82 | 72 | 3.95 | 4.03 | ALC10A822EB063 |
| 10000 | 35x50 | 64 | 51 | 4.85 | 5.40 | ALC10A103DF063 |
| 10000 | 40x35 | 80 | 72 | 4.58 | 4.67 | ALC10A103EC063 |
| 12000 | 40x40 | 64 | 57 | 5.42 | 5.55 | ALC10A123ED063 |
| 15000 | 40x50 | 44 | 39 | 7.02 | 7.18 | ALC10A153EF063 |
| 18000 | 40x60 | 35 | 31 | 8.54 | 8.75 | ALC10A183EH063 |
| 27000 | 40x80 | 24 | 21 | 10.53 | 10.78 | ALC10A273EL063 |
| 39000 | 40x105 | 19 | 17 | 12.23 | 13.51 | ALC10A393EP063 |
| 100 VDC (U_R) | | | | | | |
| 1000 | 25x30 | 243 | 182 | 1.67 | 2.04 | ALC10A102BB100 |
| 1200 | 25x35 | 203 | 152 | 1.93 | 2.36 | ALC10A122BC100 |
| 1500 | 30x40 | 163 | 122 | 2.30 | 2.81 | ALC10A152CB100 |
| 1500 | 25x40 | 163 | 122 | 2.27 | 2.78 | ALC10A152BD100 |
| 1800 | 30x35 | 137 | 103 | 2.64 | 3.23 | ALC10A182CC100 |
| 2200 | 30x40 | 113 | 85 | 3.05 | 3.73 | ALC10A222CD100 |
| 2700 | 35x35 | 92 | 69 | 3.57 | 4.37 | ALC10A272DC100 |
| 2700 | 40x30 | 121 | 104 | 3.72 | 3.88 | ALC10A272EB100 |
| 3300 | 30x50 | 76 | 57 | 4.05 | 4.95 | ALC10A332CF100 |
| 3300 | 35x40 | 76 | 57 | 4.11 | 5.03 | ALC10A332DD100 |
| 3300 | 40x35 | 106 | 92 | 4.09 | 4.24 | ALC10A332EC100 |
| 3900 | 40x40 | 85 | 74 | 4.88 | 5.08 | ALC10A392ED100 |
| 4700 | 35x50 | 55 | 41 | 5.23 | 6.40 | ALC10A472DF100 |

Termination Style A,C,D,E,F,G,H,J or K 

ARTICLE TABLE ALC10 (85°C)

| Cap (μ F) | Case Size (mm) | ESR ($m\Omega$) at 20°C 100Hz (max) | Impedance ($m\Omega$) at 20°C 10 KHz (max) | Ripple current(A) at 85°C | | Type number |
|-----------------------------------|----------------------|---|--|------------------------------|--------|----------------|
| | | | | 100 Hz | 10 KHz | |
| 100 VDC (U_R) | | | | | | |
| 4700 | 40x45 | 70 | 61 | 5.60 | 5.83 | ALC10A472EE100 |
| 5600 | 40x50 | 59 | 51 | 6.41 | 6.68 | ALC10A562EF100 |
| 6800 | 40x55 | 53 | 46 | 6.61 | 6.84 | ALC10A682EG100 |
| 8200 | 40x60 | 44 | 39 | 7.36 | 7.61 | ALC10A822EH100 |
| 12000 | 40x80 | 31 | 27 | 9.14 | 9.45 | ALC10A123EL100 |
| 18000 | 40x105 | 19 | 17 | 11.34 | 12.61 | ALC10A183EP100 |
| 200 VDC (U_R) | | | | | | |
| 330 | 25x30 | 486 | 340 | 1.18 | 1.63 | ALC10A331BB200 |
| 390 | 25x35 | 412 | 288 | 1.36 | 1.87 | ALC10A391BC200 |
| 470 | 30x30 | 343 | 240 | 1.58 | 2.18 | ALC10A471CB200 |
| 470 | 25x40 | 343 | 240 | 1.56 | 2.15 | ALC10A471BD200 |
| 560 | 30x35 | 288 | 202 | 1.82 | 2.51 | ALC10A561CC200 |
| 680 | 30x40 | 238 | 167 | 2.10 | 2.89 | ALC10A681CD200 |
| 820 | 35x35 | 198 | 139 | 2.43 | 3.35 | ALC10A821DC200 |
| 820 | 40x30 | 178 | 142 | 3.06 | 3.63 | ALC10A821EB200 |
| 1000 | 30x50 | 163 | 114 | 2.76 | 3.80 | ALC10A102CF200 |
| 1000 | 35x40 | 163 | 114 | 2.81 | 3.87 | ALC10A102DD200 |
| 1000 | 40x35 | 153 | 124 | 3.43 | 3.99 | ALC10A102EC200 |
| 1200 | 35x50 | 135 | 82 | 3.06 | 4.01 | ALC10A122DF200 |
| 1200 | 40x40 | 124 | 99 | 4.02 | 4.69 | ALC10A122ED200 |
| 1500 | 35x50 | 110 | 77 | 3.70 | 5.10 | ALC10A152DF200 |
| 1500 | 40x45 | 101 | 81 | 4.61 | 5.38 | ALC10A152EE200 |
| 1800 | 40x50 | 84 | 68 | 5.27 | 6.15 | ALC10A182EF200 |
| 2200 | 40x60 | 67 | 53 | 6.29 | 7.43 | ALC10A222EH200 |
| 3300 | 40x80 | 46 | 37 | 7.83 | 9.17 | ALC10A332EL200 |
| 4700 | 40x105 | 45 | 32 | 8.08 | 11.73 | ALC10A472EP200 |
| 5600 | 45x105 | 42 | 29 | 8.51 | 12.16 | ALC10G562FP200 |
| 8200 | 50x105 | 33 | 25 | 9.17 | 11.76 | ALC10G822KP200 |
| 250 VDC (U_R) | | | | | | |
| 220 | 25x30 | 727 | 473 | 0.97 | 1.41 | ALC10A221BB250 |
| 270 | 25x35 | 593 | 385 | 1.13 | 1.65 | ALC10A271BC250 |
| 330 | 30x30 | 486 | 316 | 1.33 | 1.94 | ALC10A331CB250 |
| 330 | 25x35 | 490 | 320 | 1.34 | 1.95 | ALC10A331BC250 |
| 330 | 25x40 | 486 | 316 | 1.31 | 1.91 | ALC10A331BD250 |
| 470 | 30x35 | 343 | 223 | 1.67 | 2.43 | ALC10A471CC250 |
| 560 | 30x40 | 288 | 187 | 1.91 | 2.78 | ALC10A561CD250 |
| 680 | 35x35 | 238 | 155 | 2.22 | 3.23 | ALC10A681DC250 |
| 680 | 30x50 | 238 | 155 | 2.29 | 3.34 | ALC10A681CF250 |
| 680 | 40x30 | 187 | 144 | 2.79 | 3.56 | ALC10A681EB250 |
| 820 | 35x40 | 198 | 129 | 2.55 | 3.72 | ALC10A821DD250 |
| 820 | 40x40 | 153 | 116 | 3.80 | 4.91 | ALC10A821ED250 |
| 1000 | 35x50 | 163 | 106 | 3.26 | 4.75 | ALC10A102DF250 |
| 1000 | 40x45 | 126 | 96 | 4.33 | 5.58 | ALC10A102EE250 |
| 1200 | 35x60 | 140 | 100 | 3.76 | 5.48 | ALC10A122DH250 |
| 1200 | 40x50 | 104 | 80 | 4.94 | 6.37 | ALC10A122EF250 |
| 1500 | 40x55 | 89 | 69 | 5.29 | 6.58 | ALC10A152EG250 |
| 1800 | 35x80 | 100 | 82 | 4.60 | 6.69 | ALC10A182DL250 |
| 1800 | 40x60 | 74 | 58 | 5.92 | 7.34 | ALC10A182EH250 |
| 2200 | 40x80 | 57 | 43 | 7.33 | 9.49 | ALC10A222EL250 |
| 3900 | 40x105 | 46 | 32 | 7.78 | 11.71 | ALC10A392EP250 |
| 4700 | 45x105 | 42 | 29 | 8.22 | 12.11 | ALC10G472FP250 |
| 5600 | 50x105 | 38 | 27 | 8.63 | 12.03 | ALC10G562KP250 |

Termination Style A,C,D,E,F,G,H,J or K 

ARTICLE TABLE ALC10 (85°C)

| Cap (μ F) | Case Size (mm) | ESR ($m\Omega$) at 20°C 100Hz (max) | Impedance ($m\Omega$) at 20°C 10 KHz (max) | Ripple current(A) at 85°C | | Type number |
|-----------------------------------|----------------------|---|--|------------------------------|--------|----------------|
| | | | | 100 Hz | 10 KHz | |
| 350 VDC (U_r) | | | | | | |
| 120 | 25x30 | 1139 | 736 | 0.83 | 1.75 | ALC10A121BB350 |
| 150 | 25x35 | 912 | 589 | 0.99 | 2.07 | ALC10A151BC350 |
| 180 | 25x40 | 761 | 492 | 1.13 | 2.37 | ALC10A181BD350 |
| 180 | 30x30 | 776 | 506 | 1.11 | 2.19 | ALC10A181CB350 |
| 270 | 30x35 | 527 | 346 | 1.41 | 2.65 | ALC10A271CC350 |
| 330 | 30x40 | 432 | 284 | 1.65 | 3.07 | ALC10A331CD350 |
| 330 | 40x30 | 424 | 277 | 2.02 | 3.97 | ALC10A331EB350 |
| 390 | 30x50 | 364 | 238 | 1.92 | 3.65 | ALC10A391CF350 |
| 390 | 35x35 | 386 | 259 | 1.82 | 3.07 | ALC10A391DC350 |
| 390 | 40x35 | 361 | 236 | 2.33 | 4.50 | ALC10A391EC350 |
| 470 | 35x40 | 321 | 216 | 2.07 | 3.47 | ALC10A471DD350 |
| 470 | 40x40 | 299 | 195 | 2.69 | 5.22 | ALC10A471ED350 |
| 560 | 35x50 | 268 | 180 | 2.80 | 4.80 | ALC10A561DF350 |
| 560 | 40x45 | 251 | 164 | 3.04 | 5.88 | ALC10A561EE350 |
| 680 | 40x50 | 207 | 136 | 3.46 | 6.65 | ALC10A681EF350 |
| 820 | 35x60 | 190 | 130 | 3.40 | 5.50 | ALC10A821DH350 |
| 820 | 40x55 | 174 | 114 | 3.84 | 7.16 | ALC10A821EG350 |
| 820 | 40x60 | 172 | 112 | 3.99 | 7.67 | ALC10A821EH350 |
| 1000 | 35x80 | 154 | 104 | 3.90 | 6.40 | ALC10A102DL350 |
| 1200 | 40x80 | 119 | 78 | 4.95 | 9.20 | ALC10A122EL350 |
| 1800 | 40x105 | 81 | 54 | 6.14 | 10.73 | ALC10A182EP350 |
| 2700 | 45x105 | 63 | 42 | 7.00 | 11.44 | ALC10G272FP350 |
| 3300 | 50x105 | 54 | 36 | 7.54 | 11.57 | ALC10G332KP350 |

400 VDC (U_r)

| | | | | | | |
|------|--------|------|-----|------|-------|----------------|
| 100 | 25x30 | 1400 | 943 | 0.77 | 1.60 | ALC10A101BB400 |
| 120 | 25x35 | 1166 | 785 | 0.90 | 1.87 | ALC10A121BC400 |
| 150 | 30x30 | 950 | 645 | 1.04 | 2.03 | ALC10A151CB400 |
| 150 | 25x40 | 935 | 630 | 1.06 | 2.18 | ALC10A151BD400 |
| 180 | 30x35 | 791 | 536 | 1.20 | 2.36 | ALC10A181CC400 |
| 220 | 30x35 | 650 | 400 | 1.31 | 2.47 | ALC10A221CC400 |
| 220 | 30x40 | 648 | 440 | 1.41 | 2.74 | ALC10A221CD400 |
| 270 | 35x35 | 547 | 376 | 1.61 | 2.88 | ALC10A271DC400 |
| 270 | 40x30 | 441 | 284 | 1.85 | 3.67 | ALC10A271EB400 |
| 330 | 35x35 | 461 | 320 | 1.73 | 2.92 | ALC10A331DC400 |
| 330 | 30x50 | 438 | 299 | 1.82 | 3.42 | ALC10A331CF400 |
| 330 | 35x40 | 449 | 309 | 1.84 | 3.27 | ALC10A331DD400 |
| 330 | 40x35 | 378 | 252 | 2.29 | 4.21 | ALC10A331EC400 |
| 390 | 35x50 | 377 | 226 | 2.19 | 3.96 | ALC10A391DF400 |
| 390 | 40x40 | 312 | 203 | 2.62 | 4.86 | ALC10A391ED400 |
| 470 | 35x50 | 321 | 223 | 2.62 | 4.41 | ALC10A471DF400 |
| 470 | 40x40 | 230 | 156 | 2.74 | 5.21 | ALC10A471ED400 |
| 470 | 40x45 | 258 | 168 | 3.00 | 5.49 | ALC10A471EE400 |
| 560 | 35x50 | 278 | 180 | 2.57 | 4.04 | ALC10A561DF400 |
| 560 | 35x60 | 264 | 184 | 3.01 | 5.11 | ALC10A561DH400 |
| 560 | 40x50 | 216 | 141 | 3.41 | 6.19 | ALC10A561EF400 |
| 680 | 35x60 | 232 | 142 | 2.90 | 4.73 | ALC10A681DH400 |
| 680 | 40x60 | 177 | 114 | 3.99 | 7.14 | ALC10A681EH400 |
| 820 | 35x80 | 181 | 127 | 3.70 | 6.09 | ALC10A821DL400 |
| 1000 | 35x80 | 112 | 77 | 3.98 | 6.32 | ALC10A102DL400 |
| 1000 | 40x80 | 120 | 78 | 5.00 | 8.82 | ALC10A102EL400 |
| 1500 | 40x105 | 99 | 68 | 5.79 | 10.16 | ALC10A152EP400 |
| 2200 | 45x105 | 77 | 53 | 6.56 | 10.90 | ALC10G222FP400 |
| 2700 | 50x105 | 66 | 45 | 7.11 | 11.13 | ALC10G272KP400 |

Termination Style A,C,D,E,F,G,H,J or K 

ARTICLE TABLE ALC10 (85°C)

| Cap (μ F) | Case Size (mm) | ESR ($m\Omega$) at 20°C 100Hz (max) | Impedance ($m\Omega$) at 20°C 10 KHz (max) | Ripple current(A) at 85°C | | Type number |
|-----------------------------------|----------------------|---|--|------------------------------|--------|----------------|
| | | | | 100 Hz | 10 KHz | |
| 450 VDC (U_R) | | | | | | |
| 68 | 25x30 | 1708 | 1135 | 0.69 | 1.50 | ALC10A680BB450 |
| 100 | 25x35 | 1167 | 777 | 0.88 | 1.90 | ALC10A101BC450 |
| 120 | 30x30 | 989 | 663 | 1.00 | 2.03 | ALC10A121CB450 |
| 120 | 25x40 | 973 | 648 | 1.01 | 2.18 | ALC10A121BD450 |
| 150 | 25x40 | 785 | 524 | 1.12 | 2.35 | ALC10A151BD450 |
| 150 | 30x30 | 805 | 543 | 1.10 | 2.12 | ALC10A151CB450 |
| 150 | 30x35 | 792 | 531 | 1.17 | 2.38 | ALC10A151CC450 |
| 180 | 30x40 | 661 | 443 | 1.36 | 2.76 | ALC10A181CD450 |
| 220 | 35x35 | 559 | 379 | 1.56 | 2.89 | ALC10A221DC450 |
| 220 | 30x50 | 540 | 362 | 1.61 | 3.27 | ALC10A221CF450 |
| 220 | 40x30 | 517 | 311 | 1.77 | 3.68 | ALC10A221EB450 |
| 270 | 30x50 | 446 | 301 | 1.76 | 3.43 | ALC10A271CF450 |
| 270 | 35x35 | 470 | 322 | 1.68 | 2.91 | ALC10A271DC450 |
| 270 | 35x40 | 458 | 311 | 1.78 | 3.27 | ALC10A271DD450 |
| 270 | 40x35 | 427 | 259 | 2.07 | 4.22 | ALC10A271EC450 |
| 330 | 30x50 | 373 | 253 | 1.91 | 3.54 | ALC10A331CF450 |
| 330 | 35x50 | 373 | 253 | 2.41 | 4.38 | ALC10A331DF450 |
| 330 | 40x40 | 348 | 210 | 2.47 | 4.91 | ALC10A331ED450 |
| 390 | 35x50 | 240 | 166 | 2.60 | 4.41 | ALC10A391DF450 |
| 390 | 40x45 | 293 | 177 | 2.70 | 5.53 | ALC10A391EE450 |
| 470 | 35x50 | 252 | 155 | 2.43 | 4.03 | ALC10A471DF450 |
| 470 | 35x60 | 270 | 185 | 2.95 | 5.12 | ALC10A471DH450 |
| 470 | 40x50 | 243 | 147 | 3.08 | 6.25 | ALC10A471EF450 |
| 560 | 40x60 | 202 | 121 | 3.56 | 7.04 | ALC10A561EH450 |
| 680 | 35x80 | 190 | 131 | 3.61 | 6.09 | ALC10A681DL450 |
| 820 | 40x80 | 138 | 83 | 4.47 | 8.78 | ALC10A821EL450 |
| 1000 | 40x80 | 114 | 75 | 4.95 | 9.32 | ALC10A102EL450 |
| 1200 | 40x105 | 103 | 70 | 5.57 | 10.15 | ALC10A122EP450 |
| 1800 | 45x105 | 82 | 55 | 6.27 | 10.87 | ALC10G182FP450 |
| 2200 | 50x105 | 70 | 47 | 6.81 | 11.12 | ALC10G222KP450 |
| 500 VDC (U_R) | | | | | | |
| 56 | 25x30 | 2207 | 1642 | 0.74 | 1.44 | ALC10A560BB500 |
| 68 | 25x35 | 1816 | 1351 | 0.87 | 1.70 | ALC10A680BC500 |
| 82 | 25x40 | 1507 | 1120 | 1.00 | 1.95 | ALC10A820BD500 |
| 82 | 30x30 | 1527 | 1140 | 0.99 | 1.84 | ALC10A820CB500 |
| 100 | 30x30 | 1000 | 765 | 1.08 | 1.94 | ALC10A101CB500 |
| 100 | 30x35 | 1220 | 840 | 1.15 | 2.16 | ALC10A101CC500 |
| 120 | 30x35 | 1052 | 786 | 1.25 | 2.28 | ALC10A121CC500 |
| 150 | 30x40 | 843 | 631 | 1.48 | 2.67 | ALC10A151CD500 |
| 180 | 30x50 | 699 | 522 | 1.78 | 3.27 | ALC10A181CF500 |
| 180 | 35x35 | 728 | 549 | 1.70 | 2.84 | ALC10A181DC500 |
| 180 | 40x30 | 699 | 522 | 1.76 | 3.22 | ALC10A181EB500 |
| 220 | 35x40 | 596 | 450 | 1.96 | 3.26 | ALC10A221DD500 |
| 220 | 40x35 | 571 | 426 | 2.07 | 3.82 | ALC10A221EC500 |
| 270 | 35x50 | 481 | 362 | 2.34 | 3.97 | ALC10A271DF500 |
| 270 | 40x40 | 466 | 348 | 2.41 | 4.42 | ALC10A271ED500 |
| 330 | 40x45 | 382 | 286 | 2.74 | 5.00 | ALC10A331EE500 |
| 390 | 35x60 | 340 | 258 | 2.87 | 4.67 | ALC10A391DH500 |
| 390 | 40x50 | 324 | 242 | 3.09 | 5.59 | ALC10A391EF500 |
| 470 | 40x60 | 269 | 201 | 3.56 | 6.43 | ALC10A471EH500 |
| 560 | 35x80 | 240 | 182 | 3.50 | 5.57 | ALC10A561DL500 |
| 680 | 40x80 | 187 | 140 | 4.40 | 7.77 | ALC10A681EL500 |
| 1000 | 40x105 | 130 | 98 | 5.43 | 9.18 | ALC10A102EP500 |
| 1500 | 45x105 | 110 | 82 | 5.97 | 9.76 | ALC10G152FP500 |
| 1800 | 50x105 | 94 | 70 | 6.45 | 10.09 | ALC10G182KP500 |

Termination Style A,C,D,E,F,G,H,J or K 

OPERATIONAL DATA

Operational Lifetime

Please see separate application notes TD003 for calculating operational life expectancy under customer specific conditions.

RELIABILITY

The failure rate is derived from our periodic test results. The failure rate (λ_T) is therefore only given at test temperature for life tests. An estimation is also given at 40°C. The expected failure rate for this capacitor range is based on our periodic test results for capacitors with structural similarity. Failure rate is frequently quoted in FIT (Failures In Time) where 1 FIT = 1×10^{-9} failures per hour.

| T_a | Failure rate per hour |
|-------|-----------------------|
| 85°C | 250 FIT |
| 40°C | 12 FIT |

Failure rate per hour for catastrophic plus parametric failures.

MECHANICAL DATA

Mounting position

The capacitor can be mounted upright or inclined to a horizontal position.

Vibration

10Hz to 500Hz at 0.75mm or 10g for 3x2hrs duration. 10Hz to 55Hz at 0.35mm or 5g for 3x0.5hrs duration (45/50mm diameter cans).

Insulating resistance

≥ 100 Mohms at 100V d.c., across insulating sleeve.

Voltage Proof

$\geq 2500V$ d.c., across insulating sleeve.

Safety vent

A safety vent for over pressure is featured on either the base (opposing end to the terminals) or on the the side of the can. This is in the form of a grooved section on the surface of the can which is a weakened area and is designed to relieve build up of internal pressure due to over stress or catastrophic failure.

Statements of suitability for certain applications are based on our knowledge of typical operating conditions for such applications, but are not intended to constitute – and we specifically disclaim – any warranty concerning suitability for a specific customer application or use. This Information is intended for use only by customers who have the requisite experience and capability to determine the correct products for their application. Any technical advice inferred from this Information or otherwise provided by us with reference to the use of our products is given gratis, and we assume no obligation or liability for the advice given or results obtained.