

Aluminum Capacitors Standard - 85 °C Snap-In



FEATURES

- Useful life: 2000 h at +85 °C
- Polarized aluminum electrolytic capacitors
- Small dimension
- High C x U product
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



RoHS
COMPLIANT

APPLICATIONS

- General purpose audio / video systems, industrial electronics
- Smoothing and filtering
- Standard and switch mode power supplies



| QUICK REFERENCE DATA | |
|---|-------------------------|
| DESCRIPTION | VALUE |
| Nominal case size (Ø D x L in mm) | 22 x 25 to 40 x 60 |
| Rated capacitance range, C _R | 1200 µF to 100 000 µF |
| Capacitance tolerance | ± 20 % |
| Rated voltage range, U _R | 6.3 V to 100 V |
| Category temperature range | -40 °C to +85 °C |
| Load life at 85 °C | 2000 h |
| Shelf life at 0 V, 85 °C | 1000 h |
| Based on sectional specification | IEC 60384-4 / EN 130300 |
| Climatic category IEC 60068 | 40 / 85 / 56 |

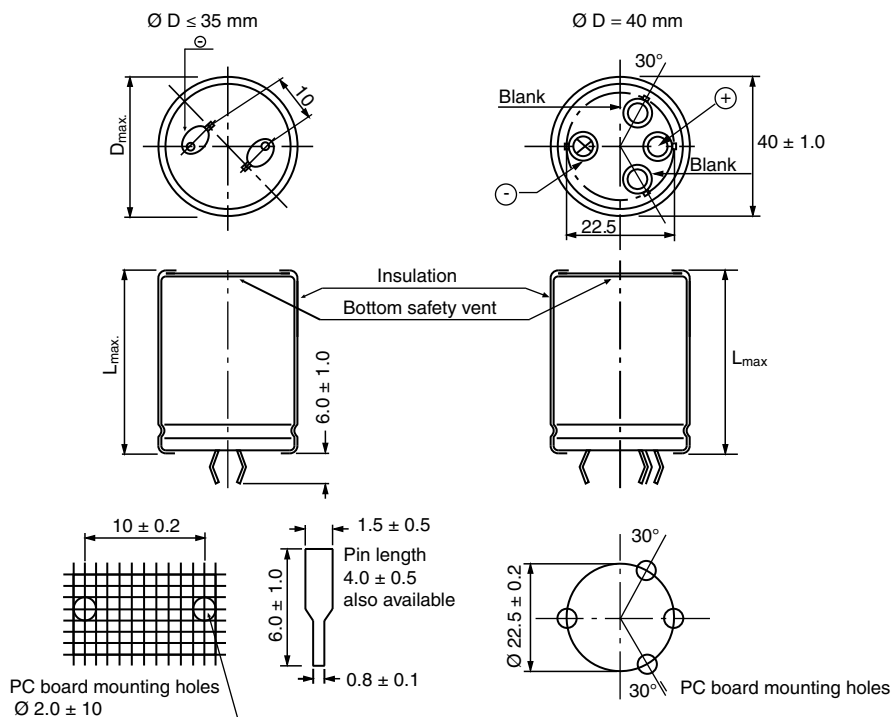
| SELECTION CHART FOR C _R , U _R , AND RELEVANT NOMINAL CASE SIZES (Ø D x L in mm) | | | | | | | | | |
|---|--------------------|----|----|----|----|--------------------|-------------------------------|-------------------------------|-------------------------------|
| C _R (µF) | U _R (V) | | | | | | | | |
| | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 80 | 100 |
| 1200 | - | - | - | - | - | - | - | 22 x 25 | 22 x 30 25 x 25 |
| 1500 | - | - | - | - | - | - | - | 22 x 30 | 22 x 35 25 x 30 30 x 25 |
| 1800 | - | - | - | - | - | - | 22 x 25 | 22 x 30 25 x 25 | 22 x 40 25 x 35 30 x 30 |
| 2200 | - | - | - | - | - | - | 22 x 30 25 x 25 | 22 x 35 25 x 30 30 x 25 | 22 x 45 25 x 40 30 x 30 |
| 2700 | - | - | - | - | - | - | 22 x 35 25 x 30 | 22 x 40 25 x 35 30 x 30 | 25 x 45 30 x 35 35 x 30 |
| 3300 | - | - | - | - | - | 22 x 30 25 x 25 | 22 x 35 25 x 30 30 x 25 | 22 x 45 25 x 40 30 x 30 | 25 x 50 30 x 40 35 x 35 |



| SELECTION CHART FOR C_R , U_R , AND RELEVANT NOMINAL CASE SIZES ($\varnothing D \times L$ in mm) | | | | | | | | | |
|---|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|--|--|-------------------------------|--------------------|
| C_R (μF) | U_R (V) | | | | | | | | |
| | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 80 | 100 |
| 3900 | - | - | - | - | - | - | 22 x 40 25 x 35 30 x 30 | 22 x 50 25 x 45 30 x 35 | 30 x 45 35 x 35 |
| 4700 | - | - | - | - | 22 x 30 25 x 25 | 22 x 40 25 x 35 30 x 25 35 x 25 | 22 x 50 25 x 40 30 x 35 35 x 30 | 25 x 50 30 x 40 35 x 30 | 30 x 50 35 x 40 |
| 5600 | - | - | - | 22 x 25 | 22 x 35 25 x 30 | 22 x 45 25 x 40 30 x 30 35 x 25 | 25 x 45 30 x 35 35 x 30 | 30 x 45 35 x 35 | 35 x 45 40 x 40 |
| 6800 | - | - | - | 22 x 30 25 x 25 | 22 x 40 25 x 30 30 x 25 | 22 x 50 25 x 40 30 x 35 35 x 30 | 25 x 50 30 x 40 35 x 30 | 35 x 40 | 40 x 50 |
| 8200 | - | - | - | 22 x 35 25 x 30 | 22 x 45 25 x 35 30 x 30 | 25 x 50 30 x 40 35 x 30 | 30 x 45 35 x 35 | 35 x 45 40 x 40 | 40 x 50 |
| 10 000 | - | - | 22 x 25 | 22 x 40 25 x 30 30 x 25 | 22 x 50 25 x 40 30 x 30 | 30 x 45 35 x 35 | 30 x 50 35 x 40 | 40 x 50 | - |
| 12 000 | - | 22 x 25 | 22 x 30 25 x 25 | 22 x 45 25 x 35 30 x 30 | 25 x 45 30 x 35 35 x 30 | 30 x 50 35 x 40 | 35 x 45 40 x 40 | - | - |
| 15 000 | - | 22 x 30 25 x 25 | 22 x 35 25 x 30 30 x 25 | 22 x 50 25 x 40 30 x 35 | 30 x 40 35 x 35 | 35 x 45 | - | - | - |
| 18 000 | 22 x 30 25 x 25 | 22 x 35 25 x 25 | 22 x 40 25 x 35 30 x 30 | 25 x 45 30 x 35 35 x 30 | 30 x 45 35 x 40 | 35 x 50 40 x 40 | - | - | - |
| 22 000 | 22 x 35 | 22 x 40 25 x 30 30 x 25 | 22 x 50 25 x 40 30 x 30 | 30 x 45 35 x 35 | 35 x 45 40 x 40 | 40 x 50 | - | - | - |
| 27 000 | 22 x 40 30 x 25 | 22 x 45 25 x 35 30 x 30 | 25 x 45 30 x 35 | 30 x 50 35 x 40 | 40 x 50 | 40 x 60 | - | - | - |
| 33 000 | 22 x 45 25 x 35 30 x 30 | 22 x 50 25 x 40 35 x 25 | 30 x 40 35 x 30 | 35 x 45 40 x 40 | 40 x 50 | - | - | - | - |
| 39 000 | 22 x 50 25 x 40 35 x 25 | 25 x 45 30 x 25 | 30 x 45 | - | - | - | - | - | - |
| 47 000 | 30 x 35 35 x 30 | 25 x 50 30 x 40 | 30 x 50 35 x 40 | - | - | - | - | - | - |
| 56 000 | 30 x 40 35 x 30 | 30 x 45 | 40 x 40 | - | - | - | - | - | - |
| 68 000 | - | - | 35 x 50 | - | - | - | - | - | - |
| 100 000 | 40 x 40 | 40 x 50 | 40 x 60 | - | - | - | - | - | - |



DIMENSIONS in millimeters **AND AVAILABLE FORMS**



| DIMENSIONS in millimeters, MASS AND PACKAGING QUANTITIES | | | |
|--|--|-------------|---|
| NOMINAL CASE SIZE $\varnothing D \times L$ | MAXIMUM SIZE $\varnothing D_{max.} \times L_{max.}$ | MASS (g) | PACKAGING QUANTITIES (units per box) |
| 22 x 25 | 23 x 27 | 14 | 200 |
| 22 x 30 | 23 x 32 | 16 | |
| 22 x 35 | 23 x 37 | 19 | |
| 22 x 40 | 23 x 42 | 22 | |
| 22 x 45 | 23 x 47 | 24 | |
| 22 x 50 | 23 x 52 | 27 | |
| 25 x 25 | 26.4 x 27 | 10 | 150 |
| 25 x 30 | 26.4 x 32 | 21 | |
| 25 x 35 | 26.4 x 37 | 25 | |
| 25 x 40 | 26.4 x 42 | 28 | |
| 25 x 45 | 26.4 x 47 | 31 | |
| 25 x 50 | 26.4 x 52 | 35 | |
| 30 x 25 | 31 x 27 | 25 | 100 |
| 30 x 30 | 31 x 32 | 30 | |
| 30 x 35 | 31 x 37 | 35 | |
| 30 x 40 | 31 x 42 | 40 | |
| 30 x 45 | 31 x 47 | 45 | |
| 30 x 50 | 31 x 52 | 50 | |
| 35 x 25 | 36 x 27 | 34 | 50 |
| 35 x 30 | 36 x 32 | 41 | |
| 35 x 35 | 36 x 37 | 48 | |
| 35 x 40 | 36 x 42 | 55 | |
| 35 x 45 | 36 x 47 | 62 | |
| 35 x 50 | 36 x 52 | 68 | |
| 40 x 40 | 41 x 42 | 72 | 50 |
| 40 x 50 | 41 x 52 | 89 | |
| 40 x 60 | 41 x 62 | 107 | |



| ELECTRICAL DATA | |
|-----------------|---|
| SYMBOL | DESCRIPTION |
| C_R | Rated capacitance at 120 Hz |
| U_R | Rated voltage |
| ESR | Equivalent series resistance at 120 Hz |
| I_R | Rated RMS ripple current at 120 Hz, 85 °C |

Note

- Unless otherwise specified, all electrical values apply at $T_{amb} = 20\text{ °C}$, $P = 80\text{ kPa}$ to 120 kPa , $RH = 45\%$ to 75%

ORDERING EXAMPLE

Electrolytic capacitor EYN series

4700 μF / 35 V; $\pm 20\%$

Nominal case size: 22 mm x 30 mm

Snap-in pin 4 mm, fully insulated

Ordering code: MALIEYN07LV447F42K

| ELECTRICAL DATA AND ORDERING INFORMATION | | | | | | | |
|--|--------------------------------------|--|------------------------|-------------------------------|---------------------------------------|----------------------------------|----------------------------------|
| U_R (V) | C_R 120 Hz (μF) | NOMINAL CASE SIZE $\varnothing D \times L$ (mm) | I_R 120 Hz (A) | I_{L5} (μA) | ESR 120 Hz MAX. (Ω) | ORDERING CODE 6 mm PIN LENGTH | ORDERING CODE 4 mm PIN LENGTH |
| 6.3 | 18 000 | 22 x 30 | 3.85 | 1010 | 0.033 | MALIEYN07LV518B02K | MALIEYN07LV518B42K |
| | 18 000 | 25 x 25 | 3.96 | 1010 | 0.033 | MALIEYN07AU518B02K | MALIEYN07AU518B42K |
| | 22 000 | 22 x 35 | 4.34 | 1117 | 0.030 | MALIEYN07LA522B02K | MALIEYN07LA522B42K |
| | 27 000 | 22 x 40 | 4.85 | 1237 | 0.027 | MALIEYN07LB527B02K | MALIEYN07LB527B42K |
| | 27 000 | 30 x 25 | 4.89 | 1237 | 0.027 | MALIEYN07BU527B02K | MALIEYN07BU527B42K |
| | 33 000 | 22 x 45 | 5.36 | 1368 | 0.024 | MALIEYN07LC533B02K | MALIEYN07LC533B42K |
| | 33 000 | 25 x 35 | 5.32 | 1368 | 0.024 | MALIEYN07AA533B02K | MALIEYN07AA533B42K |
| | 33 000 | 30 x 30 | 5.47 | 1368 | 0.024 | MALIEYN07BV533B02K | MALIEYN07BV533B42K |
| | 39 000 | 22 x 50 | 5.83 | 1487 | 0.022 | MALIEYN07LD539B02K | MALIEYN07LD539B42K |
| | 39 000 | 25 x 40 | 5.82 | 1487 | 0.022 | MALIEYN07AB539B02K | MALIEYN07AB539B42K |
| | 39 000 | 35 x 25 | 5.82 | 1487 | 0.022 | MALIEYN07CU539B02K | MALIEYN07CU539B42K |
| | 47 000 | 30 x 35 | 6.26 | 1632 | 0.021 | MALIEYN07BA547B02K | MALIEYN07BA547B42K |
| | 47 000 | 35 x 30 | 6.41 | 1632 | 0.021 | MALIEYN07CV547B02K | MALIEYN07CV547B42K |
| | 56 000 | 30 x 40 | 6.80 | 1782 | 0.020 | MALIEYN07BB556B02K | MALIEYN07BB556B42K |
| | 56 000 | 35 x 30 | 6.64 | 1782 | 0.020 | MALIEYN07CV556B02K | MALIEYN07CV556B42K |
| | 100 000 | 40 x 40 | 8.49 | 2381 | 0.017 | MALIEYN07DB610B02K | MALIEYN07DB610B42K |
| 10 | 12 000 | 22 x 25 | 3.31 | 1039 | 0.044 | MALIEYN07LU512C02K | MALIEYN07LU512C42K |
| | 15 000 | 22 x 30 | 3.82 | 1162 | 0.038 | MALIEYN07LV515C02K | MALIEYN07LV515C42K |
| | 15 000 | 25 x 25 | 3.39 | 1162 | 0.038 | MALIEYN07AU515C02K | MALIEYN07AU515C42K |
| | 18 000 | 22 x 35 | 4.28 | 1273 | 0.034 | MALIEYN07LA518C02K | MALIEYN07LA518C42K |
| | 18 000 | 25 x 25 | 4.17 | 1273 | 0.034 | MALIEYN07AU518C02K | MALIEYN07AU518C42K |
| | 22 000 | 22 x 40 | 4.79 | 1407 | 0.030 | MALIEYN07LB522C02K | MALIEYN07LB522C42K |
| | 22 000 | 25 x 30 | 4.71 | 1407 | 0.030 | MALIEYN07AV522C02K | MALIEYN07AV522C42K |
| | 22 000 | 30 x 25 | 4.83 | 1407 | 0.030 | MALIEYN07BU522C02K | MALIEYN07BU522C42K |
| | 27 000 | 22 x 45 | 5.30 | 1559 | 0.027 | MALIEYN07LC527C02K | MALIEYN07LC527C42K |
| | 27 000 | 25 x 35 | 5.26 | 1559 | 0.027 | MALIEYN07AA527C02K | MALIEYN07AA527C42K |
| | 27 000 | 30 x 30 | 5.41 | 1559 | 0.027 | MALIEYN07BV527C02K | MALIEYN07BV527C42K |
| | 33 000 | 22 x 50 | 5.82 | 1723 | 0.025 | MALIEYN07LD533C02K | MALIEYN07LD533C42K |
| | 33 000 | 25 x 40 | 5.81 | 1723 | 0.025 | MALIEYN07AB533C02K | MALIEYN07AB533C42K |
| | 33 000 | 35 x 25 | 5.81 | 1723 | 0.025 | MALIEYN07CU533C02K | MALIEYN07CU533C42K |
| | 39 000 | 25 x 45 | 6.31 | 1873 | 0.023 | MALIEYN07AC539C02K | MALIEYN07AC539C42K |
| | 39 000 | 35 x 30 | 6.38 | 1873 | 0.023 | MALIEYN07CV539C02K | MALIEYN07CV539C42K |
| | 39 000 | 30 x 35 | 6.22 | 1873 | 0.023 | MALIEYN07BA539C02K | MALIEYN07BA539C42K |
| | 47 000 | 25 x 50 | 6.83 | 2057 | 0.021 | MALIEYN07AD547C02K | MALIEYN07AD547C42K |
| | 47 000 | 30 x 40 | 6.78 | 2057 | 0.021 | MALIEYN07BB547C02K | MALIEYN07BB547C42K |
| 56 000 | 30 x 45 | 7.31 | 2245 | 0.020 | MALIEYN07BC556C02K | MALIEYN07BC556C42K | |
| 100 000 | 40 x 50 | 9.35 | 3000 | 0.017 | MALIEYN07DD610C02K | MALIEYN07DD610C42K | |
| 16 | 10 000 | 22 x 25 | 3.32 | 949 | 0.046 | MALIEYN07LU510D02K | MALIEYN07LU510D42K |
| | 12 000 | 22 x 30 | 3.55 | 1039 | 0.041 | MALIEYN07LV512D02K | MALIEYN07LV512D42K |
| | 12 000 | 25 x 25 | 3.89 | 1039 | 0.041 | MALIEYN07AU512D02K | MALIEYN07AU512D42K |
| | 15 000 | 22 x 35 | 4.29 | 1162 | 0.035 | MALIEYN07LA515D02K | MALIEYN07LA515D42K |



| ELECTRICAL DATA AND ORDERING INFORMATION | | | | | | | |
|--|-------------------------------|---|------------------------|------------------------|---------------------------------------|----------------------------------|----------------------------------|
| U_R (V) | C_R 120 Hz (μ F) | NOMINAL CASE SIZE \varnothing D x L (mm) | I_R 120 Hz (A) | I_{L5} (μ A) | ESR 120 Hz MAX. (Ω) | ORDERING CODE 6 mm PIN LENGTH | ORDERING CODE 4 mm PIN LENGTH |
| 16 | 15 000 | 25 x 30 | 4.45 | 1162 | 0.035 | MALIEYN07AV515D02K | MALIEYN07AV515D42K |
| | 15 000 | 30 x 25 | 4.56 | 1162 | 0.035 | MALIEYN07BU515D02K | MALIEYN07BU515D42K |
| | 18 000 | 22 x 40 | 4.77 | 1273 | 0.032 | MALIEYN07LB518D02K | MALIEYN07LB518D42K |
| | 18 000 | 25 x 35 | 4.96 | 1273 | 0.032 | MALIEYN07AA518D02K | MALIEYN07AA518D42K |
| | 18 000 | 30 x 30 | 5.10 | 1273 | 0.032 | MALIEYN07BV518D02K | MALIEYN07BV518D42K |
| | 22 000 | 22 x 50 | 5.51 | 1407 | 0.028 | MALIEYN07LD522D02K | MALIEYN07LD522D42K |
| | 22 000 | 25 x 40 | 5.51 | 1407 | 0.028 | MALIEYN07AB522D02K | MALIEYN07AB522D42K |
| | 22 000 | 30 x 30 | 5.39 | 1407 | 0.028 | MALIEYN07BV522D02K | MALIEYN07BV522D42K |
| | 27 000 | 25 x 45 | 6.06 | 1559 | 0.026 | MALIEYN07AC527D02K | MALIEYN07AC527D42K |
| | 27 000 | 30 x 35 | 5.98 | 1972 | 0.026 | MALIEYN07BA527D02K | MALIEYN07BA527D42K |
| | 33 000 | 30 x 40 | 6.56 | 2180 | 0.023 | MALIEYN07BB533D02K | MALIEYN07BB533D42K |
| | 33 000 | 35 x 30 | 6.41 | 2180 | 0.023 | MALIEYN07CV533D02K | MALIEYN07CV533D42K |
| | 39 000 | 30 x 45 | 7.08 | 2370 | 0.022 | MALIEYN07BC539D02K | MALIEYN07BC539D42K |
| | 47 000 | 30 x 50 | 7.62 | 2602 | 0.020 | MALIEYN07BD547D02K | MALIEYN07BD547D42K |
| | 47 000 | 35 x 40 | 7.54 | 2602 | 0.020 | MALIEYN07CB547D02K | MALIEYN07CB547D42K |
| | 56 000 | 40 x 40 | 8.23 | 2840 | 0.019 | MALIEYN07DB556D02K | MALIEYN07DB556D42K |
| | 68 000 | 35 x 50 | 8.63 | 3129 | 0.018 | MALIEYN07CD568D02K | MALIEYN07CD568D42K |
| 100 000 | 40 x 60 | 10.20 | 3795 | 0.017 | MALIEYN07DF610D02K | MALIEYN07DF610D42K | |
| 25 | 5600 | 22 x 25 | 2.65 | 898 | 0.083 | MALIEYN07LU456E02K | MALIEYN07LU456E42K |
| | 6800 | 22 x 30 | 3.06 | 990 | 0.071 | MALIEYN07LV468E02K | MALIEYN07LV468E42K |
| | 6800 | 25 x 25 | 3.15 | 990 | 0.071 | MALIEYN07AU468E02K | MALIEYN07AU468E42K |
| | 8200 | 22 x 35 | 3.45 | 1087 | 0.061 | MALIEYN07LA482E02K | MALIEYN07LA482E42K |
| | 8200 | 25 x 30 | 3.57 | 1087 | 0.061 | MALIEYN07AV482E02K | MALIEYN07AV482E42K |
| | 10 000 | 22 x 40 | 3.95 | 1200 | 0.052 | MALIEYN07LB510E02K | MALIEYN07LB510E42K |
| | 10 000 | 25 x 30 | 3.89 | 1200 | 0.052 | MALIEYN07AV510E02K | MALIEYN07AV510E42K |
| | 10 000 | 30 x 25 | 3.99 | 1200 | 0.052 | MALIEYN07BU510E02K | MALIEYN07BU510E42K |
| | 12 000 | 22 x 45 | 4.41 | 1643 | 0.046 | MALIEYN07LC512E02K | MALIEYN07LC512E42K |
| | 12 000 | 25 x 35 | 4.37 | 1643 | 0.046 | MALIEYN07AA512E02K | MALIEYN07AA512E42K |
| | 12 000 | 30 x 30 | 4.50 | 1643 | 0.046 | MALIEYN07BV512E02K | MALIEYN07BV512E42K |
| | 15 000 | 22 x 50 | 4.94 | 1837 | 0.039 | MALIEYN07LD515E02K | MALIEYN07LD515E42K |
| | 15 000 | 25 x 40 | 4.94 | 1837 | 0.039 | MALIEYN07AB515E02K | MALIEYN07AB515E42K |
| | 15 000 | 30 x 35 | 5.10 | 1837 | 0.039 | MALIEYN07BA515E02K | MALIEYN07BA515E42K |
| | 18 000 | 25 x 45 | 5.45 | 2012 | 0.035 | MALIEYN07AC518E02K | MALIEYN07AC518E42K |
| | 18 000 | 30 x 35 | 5.38 | 2012 | 0.035 | MALIEYN07BA518E02K | MALIEYN07BA518E42K |
| | 18 000 | 35 x 30 | 5.51 | 2012 | 0.035 | MALIEYN07CV518E02K | MALIEYN07CV518E42K |
| | 22 000 | 30 x 45 | 6.22 | 2225 | 0.031 | MALIEYN07BC522E02K | MALIEYN07BC522E42K |
| | 22 000 | 35 x 35 | 6.12 | 2225 | 0.031 | MALIEYN07CA522E02K | MALIEYN07CA522E42K |
| | 27 000 | 30 x 50 | 6.82 | 2465 | 0.028 | MALIEYN07BD527E02K | MALIEYN07BD527E42K |
| 27 000 | 35 x 40 | 6.74 | 2465 | 0.028 | MALIEYN07CB527E02K | MALIEYN07CB527E42K | |
| 33 000 | 35 x 45 | 7.35 | 2725 | 0.025 | MALIEYN07CC533E02K | MALIEYN07CC533E42K | |
| 33 000 | 40 x 40 | 7.48 | 2725 | 0.025 | MALIEYN07DB533E02K | MALIEYN07DB533E42K | |
| 35 | 4700 | 22 x 30 | 3.06 | 1028 | 0.085 | MALIEYN07LV447F02K | MALIEYN07LV447F42K |
| | 4700 | 25 x 25 | 2.98 | 1028 | 0.085 | MALIEYN07AU447F02K | MALIEYN07AU447F42K |
| | 5600 | 22 x 35 | 3.28 | 1122 | 0.073 | MALIEYN07LA456F02K | MALIEYN07LA456F42K |
| | 5600 | 25 x 30 | 3.39 | 1122 | 0.073 | MALIEYN07AV456F02K | MALIEYN07AV456F42K |
| | 6800 | 22 x 40 | 3.73 | 1464 | 0.063 | MALIEYN07LB468F02K | MALIEYN07LB468F42K |
| | 6800 | 25 x 30 | 3.67 | 1464 | 0.063 | MALIEYN07AV468F02K | MALIEYN07AV468F42K |
| | 6800 | 30 x 25 | 3.76 | 1464 | 0.063 | MALIEYN07BU468F02K | MALIEYN07BU468F42K |
| | 8200 | 22 x 45 | 4.13 | 1607 | 0.054 | MALIEYN07LC482F02K | MALIEYN07LC482F42K |
| | 8200 | 25 x 35 | 4.10 | 1607 | 0.054 | MALIEYN07AA482F02K | MALIEYN07AA482F42K |
| | 8200 | 30 x 30 | 4.22 | 1607 | 0.054 | MALIEYN07BV482F02K | MALIEYN07BV482F42K |
| | 10 000 | 22 x 50 | 4.68 | 1775 | 0.047 | MALIEYN07LD510F02K | MALIEYN07LD510F42K |
| | 10 000 | 25 x 40 | 4.68 | 1775 | 0.047 | MALIEYN07AB510F02K | MALIEYN07AB510F42K |



| ELECTRICAL DATA AND ORDERING INFORMATION | | | | | | | |
|--|----------------------------------|---|---------------------------------|-------------------------|------------------------------|----------------------------------|----------------------------------|
| U _R (V) | C _R 120 Hz (μF) | NOMINAL CASE SIZE Ø D x L (mm) | I _R 120 Hz (A) | I _{L5} (μA) | ESR 120 Hz MAX. (Ω) | ORDERING CODE 6 mm PIN LENGTH | ORDERING CODE 4 mm PIN LENGTH |
| 35 | 10 000 | 30 x 30 | 4.58 | 1775 | 0.047 | MALIEYN07BV510F02K | MALIEYN07BV510F42K |
| | 12 000 | 25 x 45 | 5.18 | 1944 | 0.041 | MALIEYN07AC512F02K | MALIEYN07AC512F42K |
| | 12 000 | 30 x 35 | 5.11 | 1944 | 0.041 | MALIEYN07BA512F02K | MALIEYN07BA512F42K |
| | 12 000 | 35 x 30 | 5.24 | 1944 | 0.041 | MALIEYN07CV512F02K | MALIEYN07CV512F42K |
| | 15 000 | 30 x 40 | 5.72 | 2174 | 0.036 | MALIEYN07BB515F02K | MALIEYN07BB515F42K |
| | 15 000 | 35 x 35 | 5.88 | 2174 | 0.036 | MALIEYN07CA515F02K | MALIEYN07CA515F42K |
| | 18 000 | 30 x 45 | 6.28 | 2381 | 0.032 | MALIEYN07BC518F02K | MALIEYN07BC518F42K |
| | 18 000 | 35 x 40 | 6.46 | 2381 | 0.032 | MALIEYN07CB518F02K | MALIEYN07CB518F42K |
| | 22 000 | 35 x 45 | 7.07 | 2632 | 0.029 | MALIEYN07CC522F02K | MALIEYN07CC522F42K |
| | 22 000 | 40 x 40 | 7.20 | 2632 | 0.029 | MALIEYN07DB522F02K | MALIEYN07DB522F42K |
| | 27 000 | 40 x 50 | 8.14 | 2916 | 0.026 | MALIEYN07DD527F02K | MALIEYN07DD527F42K |
| | 33 000 | 40 x 50 | 8.46 | 3224 | 0.023 | MALIEYN07DD533F02K | MALIEYN07DD533F42K |
| 50 | 3300 | 22 x 30 | 2.97 | 1020 | 0.100 | MALIEYN07LV433H02K | MALIEYN07LV433H42K |
| | 3300 | 25 x 25 | 3.06 | 1020 | 0.100 | MALIEYN07AU433H02K | MALIEYN07AU433H42K |
| | 4700 | 22 x 40 | 3.83 | 1217 | 0.074 | MALIEYN07LB447H02K | MALIEYN07LB447H42K |
| | 4700 | 25 x 35 | 3.98 | 1217 | 0.074 | MALIEYN07AA447H02K | MALIEYN07AA447H42K |
| | 4700 | 30 x 25 | 3.86 | 1454 | 0.074 | MALIEYN07BU447H02K | MALIEYN07BU447H42K |
| | 4700 | 35 x 25 | 4.19 | 1454 | 0.074 | MALIEYN07CU447H02K | MALIEYN07CU447H42K |
| | 5600 | 22 x 45 | 4.26 | 1587 | 0.065 | MALIEYN07LC456H02K | MALIEYN07LC456H42K |
| | 5600 | 25 x 40 | 4.44 | 1587 | 0.065 | MALIEYN07AB456H02K | MALIEYN07AB456H42K |
| | 5600 | 30 x 30 | 4.35 | 1587 | 0.065 | MALIEYN07BV456H02K | MALIEYN07BV456H42K |
| | 5600 | 35 x 25 | 4.44 | 1587 | 0.065 | MALIEYN07CU456H02K | MALIEYN07CU456H42K |
| | 6800 | 22 x 50 | 4.77 | 1749 | 0.056 | MALIEYN07LD468H02K | MALIEYN07LD468H42K |
| | 6800 | 25 x 40 | 4.76 | 1749 | 0.056 | MALIEYN07AB468H02K | MALIEYN07AB468H42K |
| | 6800 | 30 x 35 | 4.92 | 1749 | 0.056 | MALIEYN07BA468H02K | MALIEYN07BA468H42K |
| | 6800 | 35 x 30 | 5.04 | 1749 | 0.056 | MALIEYN07CV468H02K | MALIEYN07CV468H42K |
| | 8200 | 25 x 50 | 5.43 | 1921 | 0.048 | MALIEYN07AD482H02K | MALIEYN07AD482H42K |
| | 8200 | 30 x 40 | 5.38 | 1921 | 0.048 | MALIEYN07BB482H02K | MALIEYN07BB482H42K |
| | 8200 | 35 x 30 | 5.26 | 1921 | 0.048 | MALIEYN07CV482H02K | MALIEYN07CV482H42K |
| | 10 000 | 30 x 45 | 6.07 | 2121 | 0.042 | MALIEYN07BC510H02K | MALIEYN07BC510H42K |
| | 10 000 | 35 x 35 | 5.97 | 2121 | 0.042 | MALIEYN07CA510H02K | MALIEYN07CA510H42K |
| | 12 000 | 30 x 50 | 6.62 | 2324 | 0.037 | MALIEYN07BD512H02K | MALIEYN07BD512H42K |
| | 12 000 | 35 x 40 | 6.55 | 2324 | 0.037 | MALIEYN07CB512H02K | MALIEYN07CB512H42K |
| 15 000 | 35 x 45 | 7.20 | 2598 | 0.032 | MALIEYN07CC515H02K | MALIEYN07CC515H42K | |
| 18 000 | 35 x 50 | 7.74 | 2846 | 0.029 | MALIEYN07CD518H02K | MALIEYN07CD518H42K | |
| 18 000 | 40 x 40 | 7.62 | 2846 | 0.029 | MALIEYN07DB518H02K | MALIEYN07DB518H42K | |
| 22 000 | 40 x 50 | 8.54 | 3146 | 0.026 | MALIEYN07DD522H02K | MALIEYN07DD522H42K | |
| 27 000 | 40 x 60 | 9.45 | 3486 | 0.024 | MALIEYN07DF527H02K | MALIEYN07DF527H42K | |
| 63 | 1800 | 22 x 25 | 2.20 | 900 | 0.184 | MALIEYN07LU418J02K | MALIEYN07LU418J42K |
| | 2200 | 22 x 30 | 2.50 | 995 | 0.153 | MALIEYN07LV422J02K | MALIEYN07LV422J42K |
| | 2200 | 25 x 25 | 2.58 | 995 | 0.153 | MALIEYN07AU422J02K | MALIEYN07AU422J42K |
| | 2700 | 22 x 35 | 2.94 | 1102 | 0.127 | MALIEYN07LA427J02K | MALIEYN07LA427J42K |
| | 2700 | 25 x 30 | 3.04 | 1237 | 0.127 | MALIEYN07AV427J02K | MALIEYN07AV427J42K |
| | 3300 | 22 x 35 | 3.14 | 1368 | 0.107 | MALIEYN07LA433J02K | MALIEYN07LA433J42K |
| | 3300 | 25 x 30 | 3.26 | 1368 | 0.107 | MALIEYN07AV433J02K | MALIEYN07AV433J42K |
| | 3300 | 30 x 25 | 3.34 | 1368 | 0.107 | MALIEYN07BU433J02K | MALIEYN07BU433J42K |
| | 3900 | 22 x 40 | 3.60 | 1487 | 0.092 | MALIEYN07LB439J02K | MALIEYN07LB439J42K |
| | 3900 | 25 x 35 | 3.74 | 1487 | 0.092 | MALIEYN07AA439J02K | MALIEYN07AA439J42K |
| | 3900 | 30 x 30 | 3.85 | 1487 | 0.092 | MALIEYN07BV439J02K | MALIEYN07BV439J42K |
| | 4700 | 22 x 50 | 4.19 | 1632 | 0.079 | MALIEYN07LD447J02K | MALIEYN07LD447J42K |
| | 4700 | 25 x 40 | 4.19 | 1632 | 0.079 | MALIEYN07AB447J02K | MALIEYN07AB447J42K |
| | 4700 | 30 x 35 | 4.10 | 1632 | 0.079 | MALIEYN07BA447J02K | MALIEYN07BA447J42K |
| 4700 | 35 x 30 | 4.19 | 1632 | 0.079 | MALIEYN07CV447J02K | MALIEYN07CV447J42K | |



| ELECTRICAL DATA AND ORDERING INFORMATION | | | | | | | |
|--|----------------------------------|---|---------------------------------|-------------------------|------------------------------|----------------------------------|----------------------------------|
| U _R (V) | C _R 120 Hz (μF) | NOMINAL CASE SIZE Ø D x L (mm) | I _R 120 Hz (A) | I _{L5} (μA) | ESR 120 Hz MAX. (Ω) | ORDERING CODE 6 mm PIN LENGTH | ORDERING CODE 4 mm PIN LENGTH |
| 63 | 5600 | 25 x 45 | 4.65 | 1782 | 0.068 | MALIEYN07AC456J02K | MALIEYN07AC456J42K |
| | 5600 | 30 x 35 | 4.58 | 1782 | 0.068 | MALIEYN07BA456J02K | MALIEYN07BA456J42K |
| | 5600 | 35 x 30 | 4.70 | 1782 | 0.068 | MALIEYN07CV456J02K | MALIEYN07CV456J42K |
| | 6800 | 25 x 50 | 5.20 | 1964 | 0.059 | MALIEYN07AD468J02K | MALIEYN07AD468J42K |
| | 6800 | 30 x 40 | 5.16 | 1964 | 0.059 | MALIEYN07BB468J02K | MALIEYN07BB468J42K |
| | 6800 | 35 x 30 | 5.04 | 1964 | 0.059 | MALIEYN07CV468J02K | MALIEYN07CV468J42K |
| | 8200 | 30 x 45 | 5.62 | 2156 | 0.051 | MALIEYN07BC482J02K | MALIEYN07BC482J42K |
| | 8200 | 35 x 35 | 5.53 | 2156 | 0.051 | MALIEYN07CA482J02K | MALIEYN07CA482J42K |
| | 10 000 | 30 x 50 | 6.32 | 2381 | 0.044 | MALIEYN07BD510J02K | MALIEYN07BD510J42K |
| | 10 000 | 35 x 40 | 6.25 | 2381 | 0.044 | MALIEYN07CB510J02K | MALIEYN07CB510J42K |
| | 12 000 | 35 x 45 | 6.83 | 2608 | 0.039 | MALIEYN07CC512J02K | MALIEYN07CC512J42K |
| | 12 000 | 40 x 40 | 6.95 | 2608 | 0.039 | MALIEYN07DB512J02K | MALIEYN07DB512J42K |
| 80 | 1200 | 22 x 25 | 2.24 | 825 | 0.221 | MALIEYN07LU412W02K | MALIEYN07LU412W42K |
| | 1500 | 22 x 30 | 2.67 | 1039 | 0.179 | MALIEYN07LV415W02K | MALIEYN07LV415W42K |
| | 1800 | 22 x 30 | 2.92 | 1138 | 0.152 | MALIEYN07LV418W02K | MALIEYN07LV418W42K |
| | 1800 | 25 x 25 | 3.01 | 1138 | 0.152 | MALIEYN07AU418W02K | MALIEYN07AU418W42K |
| | 2200 | 22 x 35 | 3.25 | 1259 | 0.127 | MALIEYN07LA422W02K | MALIEYN07LA422W42K |
| | 2200 | 25 x 30 | 3.36 | 1259 | 0.127 | MALIEYN07AV422W02K | MALIEYN07AV422W42K |
| | 2200 | 30 x 25 | 3.45 | 1259 | 0.127 | MALIEYN07BU422W02K | MALIEYN07BU422W42K |
| | 2700 | 22 x 40 | 3.79 | 1394 | 0.106 | MALIEYN07LB427W02K | MALIEYN07LB427W42K |
| | 2700 | 25 x 35 | 3.94 | 1394 | 0.106 | MALIEYN07AA427W02K | MALIEYN07AA427W42K |
| | 2700 | 30 x 30 | 4.05 | 1394 | 0.106 | MALIEYN07BV427W02K | MALIEYN07BV427W42K |
| | 3300 | 22 x 45 | 4.18 | 1541 | 0.089 | MALIEYN07LC433W02K | MALIEYN07LC433W42K |
| | 3300 | 25 x 40 | 4.36 | 1541 | 0.089 | MALIEYN07AB433W02K | MALIEYN07AB433W42K |
| | 3300 | 30 x 30 | 4.27 | 1541 | 0.089 | MALIEYN07BV433W02K | MALIEYN07BV433W42K |
| | 3900 | 22 x 50 | 4.75 | 1676 | 0.077 | MALIEYN07LD439W02K | MALIEYN07LD439W42K |
| | 3900 | 25 x 45 | 4.96 | 1676 | 0.077 | MALIEYN07AC439W02K | MALIEYN07AC439W42K |
| | 3900 | 30 x 35 | 4.89 | 1676 | 0.077 | MALIEYN07BA439W02K | MALIEYN07BA439W42K |
| | 4700 | 25 x 50 | 5.44 | 1840 | 0.066 | MALIEYN07AD447W02K | MALIEYN07AD447W42K |
| | 4700 | 30 x 40 | 5.39 | 1840 | 0.066 | MALIEYN07BB447W02K | MALIEYN07BB447W42K |
| | 4700 | 35 x 30 | 5.27 | 1840 | 0.066 | MALIEYN07CV447W02K | MALIEYN07CV447W42K |
| | 5600 | 30 x 45 | 5.91 | 2008 | 0.058 | MALIEYN07BC456W02K | MALIEYN07BC456W42K |
| | 5600 | 35 x 35 | 5.81 | 2008 | 0.058 | MALIEYN07CA456W02K | MALIEYN07CA456W42K |
| | 6800 | 35 x 40 | 5.46 | 2213 | 0.050 | MALIEYN07CB468W02K | MALIEYN07CB468W42K |
| | 8200 | 35 x 45 | 6.91 | 2430 | 0.044 | MALIEYN07CC482W02K | MALIEYN07CC482W42K |
| | 8200 | 40 x 40 | 7.04 | 2430 | 0.044 | MALIEYN07DB482W02K | MALIEYN07DB482W42K |
| 10 000 | 40 x 50 | 8.14 | 2683 | 0.038 | MALIEYN07DD510W02K | MALIEYN07DD510W42K | |
| 100 | 1200 | 22 x 30 | 2.39 | 930 | 0.221 | MALIEYN07LV412L02K | MALIEYN07LV412L42K |
| | 1200 | 25 x 25 | 2.46 | 930 | 0.221 | MALIEYN07AU412L02K | MALIEYN07AU412L42K |
| | 1500 | 22 x 35 | 2.83 | 1039 | 0.179 | MALIEYN07LA415L02K | MALIEYN07LA415L42K |
| | 1500 | 25 x 30 | 2.93 | 1039 | 0.179 | MALIEYN07AV415L02K | MALIEYN07AV415L42K |
| | 1500 | 30 x 25 | 3.00 | 1039 | 0.179 | MALIEYN07BU415L02K | MALIEYN07BU415L42K |
| | 1800 | 22 x 40 | 3.26 | 1138 | 0.152 | MALIEYN07LB418L02K | MALIEYN07LB418L42K |
| | 1800 | 25 x 35 | 3.39 | 1138 | 0.152 | MALIEYN07AA418L02K | MALIEYN07AA418L42K |
| | 1800 | 30 x 30 | 3.49 | 1138 | 0.152 | MALIEYN07BV418L02K | MALIEYN07BV418L42K |
| | 2200 | 22 x 45 | 3.58 | 1259 | 0.127 | MALIEYN07LC422L02K | MALIEYN07LC422L42K |
| | 2200 | 25 x 40 | 3.74 | 1259 | 0.127 | MALIEYN07AB422L02K | MALIEYN07AB422L42K |
| | 2200 | 30 x 30 | 3.66 | 1259 | 0.127 | MALIEYN07BV422L02K | MALIEYN07BV422L42K |
| | 2700 | 25 x 45 | 4.33 | 1394 | 0.106 | MALIEYN07AC427L02K | MALIEYN07AC427L42K |
| | 2700 | 30 x 35 | 4.27 | 1394 | 0.106 | MALIEYN07BA427L02K | MALIEYN07BA427L42K |
| | 2700 | 35 x 30 | 4.37 | 1394 | 0.106 | MALIEYN07CV427L02K | MALIEYN07CV427L42K |
| | 3300 | 25 x 50 | 4.76 | 1541 | 0.089 | MALIEYN07AD433L02K | MALIEYN07AD433L42K |
| | 3300 | 30 x 40 | 4.72 | 1541 | 0.089 | MALIEYN07BB433L02K | MALIEYN07BB433L42K |



| ELECTRICAL DATA AND ORDERING INFORMATION | | | | | | | |
|--|-------------------------|--|------------------|---------------------|------------------------------|-------------------------------|-------------------------------|
| U_R (V) | C_R 120 Hz (μ F) | NOMINAL CASE SIZE \varnothing D x L (mm) | I_R 120 Hz (A) | I_{L5} (μ A) | ESR 120 Hz MAX. (Ω) | ORDERING CODE 6 mm PIN LENGTH | ORDERING CODE 4 mm PIN LENGTH |
| 100 | 3300 | 35 x 35 | 4.85 | 1541 | 0.089 | MALIEYN07CA433L02K | MALIEYN07CA433L42K |
| | 3900 | 30 x 45 | 5.36 | 1676 | 0.077 | MALIEYN07BC439L02K | MALIEYN07BC439L42K |
| | 3900 | 35 x 35 | 5.27 | 1676 | 0.077 | MALIEYN07CA439L02K | MALIEYN07CA439L42K |
| | 4700 | 30 x 50 | 5.86 | 1840 | 0.066 | MALIEYN07BD447L02K | MALIEYN07BD447L42K |
| | 4700 | 35 x 40 | 5.80 | 1840 | 0.066 | MALIEYN07CB447L02K | MALIEYN07CB447L42K |
| | 5600 | 35 x 45 | 6.34 | 2008 | 0.058 | MALIEYN07CC456L02K | MALIEYN07CC456L42K |
| | 5600 | 40 x 40 | 6.45 | 2008 | 0.058 | MALIEYN07DB456L02K | MALIEYN07DB456L42K |
| | 6800 | 40 x 50 | 7.40 | 2213 | 0.050 | MALIEYN07DD468L02K | MALIEYN07DD468L42K |
| | 8200 | 40 x 50 | 7.60 | 2430 | 0.044 | MALIEYN07DD482L02K | MALIEYN07DD482L42K |

LOW TEMPERATURE BEHAVIOR

Table for the calculation of the maximum 10 kHz impedance at low temperatures:

$$Z(10 \text{ kHz})[\Omega] = \frac{\text{Tabular value}}{C_R [\mu\text{F}]}$$

| T_{amb} ($^{\circ}$ C) | RATED VOLTAGE U_R (V) | | | | | | | | | | | | | | |
|----------------------------------|-------------------------|--------|--------|--------|--------|--------|--------|------|------|------|------|------|------|------|------|
| | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 100 | 160 | 200 | 250 | 350 | 400 | 450 | 500 |
| 25 | 9000 | 7200 | 5400 | 4050 | 3150 | 2700 | 2250 | 1710 | 1960 | 1820 | 1680 | 1870 | 1870 | 1870 | 1870 |
| 40 | 30 000 | 24 000 | 18 000 | 13 500 | 10 500 | 12 000 | 10 000 | 7600 | 7000 | 6500 | 7200 | 6600 | - | - | - |

The lower limit of the series resistance and impedance is given by the ohmic part of the contact points and the foil resistance values. Therefore it will not always be possible to achieve calculated values below 0.03 Ω .

LIFETIME TABLE $U_R \leq 100$ V

| INTERRELATION BETWEEN ALTERNATING CURRENT, AMBIENT TEMPERATURE AND LIFETIME | | | | | | | | | | | | | | | | |
|---|------|-------------|------|------|------|--------|--|-----|-----|-----|-----|-----|-----|-----|-----|-------------|
| I / I_R (FREQUENCY DEPENDANT) | | | | | | | LIFETIME MULTIPLIER L (DEPENDING ON I / I_R AND T_{amb}) | | | | | | | | | |
| FREQUENCY (Hz) | | | | | | | AMBIENT TEMPERATURE T_{amb} ($^{\circ}$ C) | | | | | | | | | |
| 50 | 100 | 120 | 250 | 500 | 1000 | > 2500 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 66 | 42 | 27 | 17 | 11 | 7.6 | 5.1 | 3.5 | 2.4 | 1.7 |
| 0.17 | 0.19 | 0.20 | 0.22 | 0.23 | 0.23 | 0.24 | 62 | 40 | 26 | 17 | 11 | 7.4 | 5.0 | 3.4 | 2.3 | 1.6 |
| 0.34 | 0.39 | 0.40 | 0.43 | 0.45 | 0.46 | 0.47 | 53 | 34 | 22 | 15 | 9.9 | 6.7 | 4.5 | 3.1 | 2.2 | 1.5 |
| 0.51 | 0.58 | 0.60 | 0.65 | 0.68 | 0.70 | 0.71 | 43 | 28 | 19 | 12 | 8.4 | 5.8 | 4.0 | 2.8 | 1.9 | 1.4 |
| 0.68 | 0.78 | 0.80 | 0.86 | 0.90 | 0.93 | 0.94 | 32 | 22 | 15 | 10 | 6.9 | 4.8 | 3.4 | 2.4 | 1.7 | 1.2 |
| 0.85 | 0.97 | 1.00 | 1.08 | 1.13 | 1.16 | 1.18 | 23 | 16 | 11 | 7.8 | 5.5 | 3.8 | 2.7 | 1.9 | 1.4 | 1.00 |
| 1.02 | 1.17 | 1.20 | 1.30 | 1.35 | 1.39 | 1.42 | 16 | 12 | 8.3 | 5.9 | 4.2 | 3.0 | 2.2 | 1.6 | 1.1 | |
| 1.20 | 1.36 | 1.40 | 1.51 | 1.58 | 1.62 | 1.65 | 11 | 3.3 | 6.0 | 4.3 | 3.1 | 2.3 | 1.7 | 1.2 | | |
| 1.37 | 1.56 | 1.60 | 1.73 | 1.81 | 1.85 | 1.89 | 7.7 | 6.0 | 4.2 | 3.1 | 2.3 | 1.7 | 1.3 | | | |
| 1.54 | 1.75 | 1.80 | 1.94 | 2.03 | 2.09 | 2.12 | 5.1 | 4.2 | 2.9 | 2.2 | 1.7 | 1.3 | | | | |
| 1.71 | 1.95 | 2.00 | 2.16 | 2.26 | 2.32 | 2.36 | 3.4 | 2.9 | 2.0 | 1.6 | 1.2 | | | | | |
| 1.88 | 2.14 | 2.20 | 2.38 | 2.48 | 2.55 | 2.59 | 2.2 | 2.0 | 1.4 | 1.1 | | | | | | |
| 2.05 | 2.34 | 2.40 | 2.59 | 2.71 | 2.78 | 2.83 | 1.5 | 1.4 | | | | | | | | |
| 2.22 | 2.53 | 2.60 | 2.81 | 2.94 | 3.01 | 3.07 | 1.0 | | | | | | | | | |

Notes

I_R Rated ripple current (120 Hz, RMS) [A] at upper category temperature T_{uc} taken from datasheet

I User ripple current [A]

T_{amb} Ambient temperature of capacitor [$^{\circ}$ C]

L Useful life multiplier

Regard L as a function of ambient temperature (x-axis) and of current (y-axis); use the current-axis according to the frequency

Statements about product lifetime are based on calculations and internal testing. They should only be interpreted as estimations. Also due to external factors, the lifetime in the field application may deviate from the calculated lifetime. In general, nothing stated herein shall be construed as a guarantee of durability.



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