

Aluminum Capacitors Power Screw Terminal

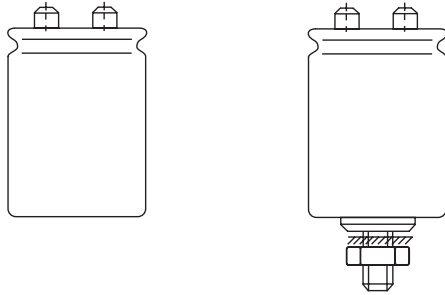


Fig.1 Component outlines.

FEATURES

- Polarized aluminum electrolytic capacitors
- Multi-lug technique guarantees extremely low R_{ESR}
- High current rating
- Very long lifetime
- Extended temperature range: 105 °C


**RoHS
COMPLIANT**
APPLICATIONS

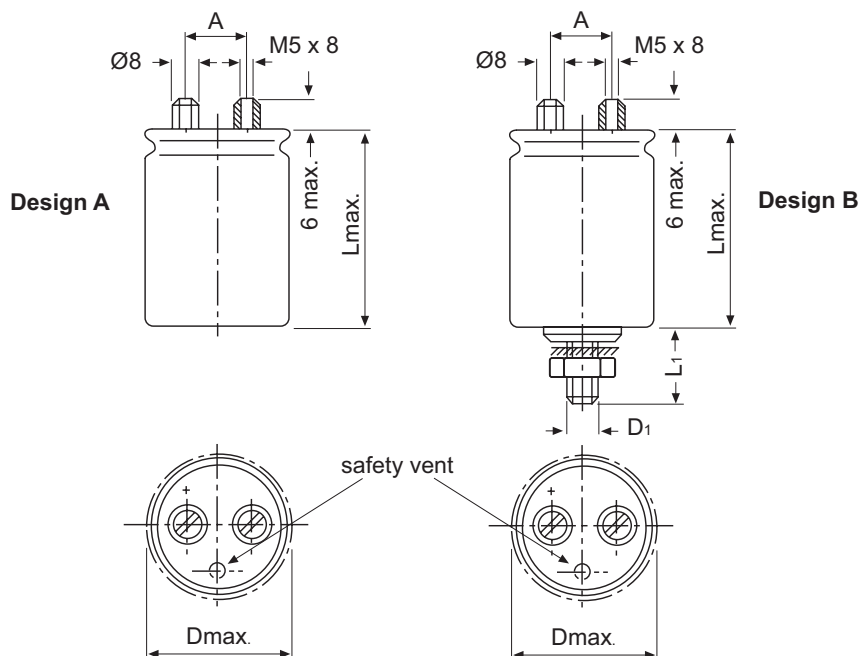
- Computers, telecommunication systems, industrial electronics
- Smoothing and filtering
- Standard and professional switched power supply units

QUICK REFERENCE DATA			
DESCRIPTION	UNIT	LOW VOLTAGE	HIGH VOLTAGE
Nominal case size ($\varnothing D \times L$)	mm	35 × 50 to 76 × 144	
Rated capacitance range C_R	μF	220 to 330000	
Capacitance tolerance	%	- 10 to + 30	
Rated voltage range	V	10 to 100	160 to 400
Category temperature range	°C	- 40 to + 105	- 40 to + 85
Endurance test at upper category temp.	h	2000	
Useful life at 105 °C and I_R applied	h	5000	-
Useful life at 85 °C and I_R applied	h	18000	7500
Useful life at 40 °C and I_R applied	h	500000	180000
Failure rate	$10^{-9}/h$	≤ 5	≤ 10
Based on sectional specification		IEC 384-4, CECC 30300, LL grade	
Based on detailed specifications		similar to CECC 30301-803, without quality assessment	
Climatic category			
IEC 68		40/105/56	40/85/56
DIN 40040		GMF	GPF

SELECTION CHART FOR C_R , U_R AND RELEVANT NOMINAL CASE SIZES ($\varnothing D \times L$ in mm)													
C_R (μF)	U_R (V)												
	10	16	25	40	50	63	100	160	200	250	350	385	400
220	-	-	-	-	-	-	-	-	-	-	35 x 50	35 x 50	35 x 50
330	-	-	-	-	-	-	-	-	-	35 x 50	35 x 60	35 x 60	35 x 80
470	-	-	-	-	-	-	-	35 x 50	35 x 50	35 x 60	35 x 80	35 x 105	35 x 105
680	-	-	-	-	-	-	-	35 x 60	35 x 60	35 x 80	35 x 105	35 x 114	50 x 80
1000	-	-	-	-	-	-	-	35 x 80	35 x 105	35 x 105	50 x 80	50 x 80	50 x 105
1500	-	-	-	-	-	-	-	35 x 105	50 x 80	50 x 80	50 x 105	50 x 105	50 x 114
2200	-	-	-	-	-	-	35 x 50	50 x 80	50 x 80	50 x 105	65 x 80	65 x 105	65 x 105
3300	-	-	-	-	-	35 x 50	35 x 80	50 x 105	50 x 114	65 x 105	65 x 114	76 x 105	76 x 105
4700	-	-	-	-	35 x 50	35 x 60	35 x 105	65 x 80	65 x 105	65 x 114	76 x 144	76 x 144	76 x 144
6800	-	-	-	35 x 50	35 x 60	35 x 80	50 x 80	65 x 105	76 x 105	76 x 144	-	-	-
10000	-	-	35 x 50	35 x 60	35 x 80	35 x 105	50 x 105	76 x 114	-	-	-	-	-
15000	35 x 50	35 x 50	35 x 60	35 x 105	35 x 105	50 x 80	65 x 80	-	-	-	-	-	-
22000	35 x 60	35 x 80	35 x 105	50 x 80	50 x 80	50 x 105	65 x 114	-	-	-	-	-	-
33000	35 x 80	35 x 105	50 x 80	50 x 105	50 x 105	65 x 105	76 x 114	-	-	-	-	-	-
47000	35 x 105	35 x 114	50 x 80	50 x 114	65 x 105	65 x 114	-	-	-	-	-	-	-
68000	50 x 80	50 x 80	50 x 105	65 x 105	65 x 114	76 x 144	-	-	-	-	-	-	-
100000	50 x 105	50 x 114	65 x 105	76 x 105	76 x 144	-	-	-	-	-	-	-	-
150000	65 x 80	65 x 105	76 x 105	76 x 144	-	-	-	-	-	-	-	-	-
220000	65 x 105	76 x 105	76 x 144	-	-	-	-	-	-	-	-	-	-
330000	76 x 114	76 x 144	-	-	-	-	-	-	-	-	-	-	-

Special values/dimensions on request

DIMENSIONS in millimeters **AND AVAILABLE FORMS**



For a non-insulated assembly the capacitor is supplied with plain washer, serrated washer and nut (M8 or M12).

DIMENSIONS in millimeters, MASS AND PACKAGING QUANTITIES				
NOMINAL CASE SIZE ØD x L	MAXIMUM SIZE ØD _{max} x L _{max}	A	D ₁	L ₁
35 x 50	35.5 x 53	13 ± 0.3	M8	12 ± 1
35 x 60	35.5 x 63	13 ± 0.3	M8	12 ± 1
35 x 80	35.5 x 80	13 ± 0.3	M8	12 ± 1
35 x 105	35.5 x 105	13 ± 0.3	M8	12 ± 1
35 x 114	35.5 x 115	13 ± 0.3	M8	12 ± 1
50 x 80	50.5 x 80	22 ± 0.3	M12	16 ± 1.5
50 x 105	50.5 x 106	22 ± 0.3	M12	16 ± 1.5
50 x 114	50.5 x 118	22 ± 0.3	M12	16 ± 1.5
65 x 80	65.5 x 81	28.5 ± 0.5	M12	16 ± 1.5
65 x 105	65.5 x 106	28.5 ± 0.5	M12	16 ± 1.5
65 x 114	65.5 x 118	28.5 ± 0.5	M12	16 ± 1.5
76 x 105	76.5 x 106	32 ± 0.5	M12	16 ± 1.5
76 x 114	76.5 x 118	32 ± 0.5	M12	16 ± 1.5
76 x 144	76.5 x 145	32 ± 0.5	M12	16 ± 1.5

Note

Maximum permissible torque for:

- M5 2.5Nm
- M8 4Nm
- M12 8Nm

The capacitors are supplied with M5 terminal screws, serrated washers and plain washers.



Aluminum Capacitors
Power Screw Terminal

Vishay Roederstein

ELECTRICAL DATA	
SYMBOL	DESCRIPTION
C _R	rated capacitance at 100 Hz
U _R	rated voltage
tan δ	max. dissipation factor at 100 Hz
R _{ESR}	max. equivalent series resistance at 100 Hz
Z	max. impedance at 10 kHz
I _R	rated AC current at 100 Hz and upper category temperature

Note

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

ORDERING EXAMPLE

Electrolytic capacitor EYP series

EYP / A 22000 μF/25 V; - 10 / + 30 %

Design A (no threaded stem); sleeve insulation

Catalog number: EYP01CM522E01.

EYP / B 22000 μF/25 V; - 10 / + 30 %

Design B (threaded stem); sleeve insulation

Catalog number: EYP02CM522E01.

Full insulation (design A only).

Catalog number: EYP01CM522E02.

ELECTRICAL DATA AND ORDERING INFORMATION								
U _R (V)	C _R 100 Hz (μF)	NOMINAL CASE SIZE ∅D x L (mm)	I _R 100 Hz 105 °C (A)	Tan δ 100 Hz	ESR 100 Hz (Ω)	Z 10 kHz (Ω)	WEIGHT (g)	CATALOG NUMBER EYP01
10	15000	35 x 50	3.3	0.61	0.065	0.060	60	EYP01CD515C01
10	22000	35 x 60	3.8	0.66	0.050	0.045	70	EYP01CF522C01
10	33000	35 x 80	6.9	0.53	0.025	0.025	100	EYP01CJ533C01
10	47000	35 x 105	8.5	0.53	0.020	0.020	140	EYP01CM547C01
10	68000	50 x 80	10.0	0.62	0.015	0.015	200	EYP01EJ568C01
10	100000	50 x 105	12.3	0.62	0.010	0.010	290	EYP01EM610C01
10	150000	65 x 80	12.9	0.85	0.010	0.010	390	EYP01HJ615C01
10	220000	65 x 105	16.0	0.87	0.010	0.010	550	EYP01HM622C01
10	330000	76 x 114	17.9	1.10	0.010	<0.010	820	EYP01K0633C01
16	15000	35 x 50	4.8	0.43	0.045	0.040	60	EYP01CD515D01
16	22000	35 x 80	4.6	0.51	0.040	0.035	90	EYP01CJ522D01
16	33000	35 x 105	5.7	0.52	0.025	0.025	130	EYP01CM533D01
16	47000	35 x 114	9.0	0.45	0.015	0.015	170	EYP01C0547D01
16	68000	50 x 80	9.6	0.57	0.015	0.015	230	EYP01EJ568D01
16	100000	50 x 114	12.7	0.55	0.010	0.010	340	EYP01E0610D01
16	150000	65 x 105	16.0	0.63	0.010	0.010	500	EYP01HM615D01
16	220000	76 x 105	16.5	0.86	0.010	0.010	710	EYP01KM622D01
16	330000	76 x 144	20.4	0.90	<0.010	<0.010	1030	EYP01KT633D01
25	10000	35 x 50	3.2	0.39	0.065	0.055	60	EYP01CD510E01
25	15000	35 x 60	5.5	0.32	0.035	0.030	80	EYP01CF515E01
25	22000	35 x 105	5.6	0.36	0.030	0.025	130	EYP01CM522E01
25	33000	50 x 80	7.3	0.42	0.020	0.020	190	EYP01EJ533E01
25	47000	50 x 80	9.4	0.41	0.015	0.015	230	EYP01EJ547E01
25	68000	50 x 105	11.7	0.41	0.010	0.010	320	EYP01EM568E01
25	100000	65 x 105	15.7	0.44	0.010	0.010	490	EYP01HM610E01
25	150000	76 x 105	15.8	0.63	0.010	0.010	700	EYP01KM615E01
25	220000	76 x 144	19.5	0.65	<0.010	<0.010	1000	EYP01KT622E01
40	6800	35 x 50	3.0	0.28	0.065	0.055	60	EYP01CD468G01
40	10000	35 x 60	5.1	0.23	0.035	0.030	80	EYP01CF510G01
40	15000	35 x 105	5.3	0.26	0.030	0.025	130	EYP01CM515G01
40	22000	50 x 80	7.1	0.29	0.025	0.02	190	EYP01EJ522G01
40	33000	50 x 105	8.7	0.30	0.015	0.015	270	EYP01EM533G01
40	47000	50 x 114	12.0	0.28	0.010	0.010	340	EYP01E0547G01
40	68000	65 x 105	14.9	0.31	0.010	0.010	490	EYP01HM568G01
40	100000	76 x 105	15.3	0.45	0.010	0.010	700	EYP01KM610G01
40	150000	76 x 144	18.7	0.48	<0.010	<0.010	1010	EYP01KT615G01



ELECTRICAL DATA AND ORDERING INFORMATION								
U _R (V)	C _R 100 Hz (μF)	NOMINAL CASE SIZE ∅D x L (mm)	I _R 100 Hz 105 °C (A)	Tan δ 100 Hz	ESR 100 Hz (Ω)	Z 10 kHz (Ω)	WEIGHT (g)	CATALOG NUMBER EYP01
50	4700	35 x 50	3.0	0.21	0.07	0.055	60	EYP01CD447H01
50	6800	35 x 60	3.5	0.23	0.055	0.045	70	EYP01CF468H01
50	10000	35 x 80	5.8	0.18	0.030	0.025	100	EYP01CJ510H01
50	15000	35 x 105	7.3	0.19	0.020	0.015	150	EYP01CM515H01
50	22000	50 x 80	8.9	0.22	0.020	0.015	210	EYP01EJ522H01
50	33000	50 x 105	11.0	0.23	0.015	0.010	310	EYP01EM533H01
50	47000	65 x 105	14.6	0.24	0.010	0.010	460	EYP01HM547H01
50	68000	65 x 114	15.4	0.29	0.010	<0.010	590	EYP01H0568H01
50	100000	76 x 144	18.4	0.33	0.010	<0.010	920	EYP01KT610H01
63	3300	35 x 50	2.7	0.17	0.080	0.055	60	EYP01CD433J01
63	4700	35 x 60	3.2	0.17	0.060	0.045	70	EYP01CF447J01
63	6800	35 x 80	5.1	0.14	0.035	0.025	100	EYP01CJ468J01
63	10000	35 x 105	6.4	0.14	0.025	0.015	140	EYP01CM510J01
63	15000	50 x 80	8.2	0.17	0.020	0.015	210	EYP01EJ515J01
63	22000	50 x 105	10.2	0.17	0.015	0.010	300	EYP01EM522J01
63	33000	65 x 105	13.7	0.18	0.010	0.010	460	EYP01HM533J01
63	47000	65 x 114	14.6	0.22	0.010	<0.010	590	EYP01H0547J01
63	68000	76 x 144	17.7	0.24	0.010	<0.010	910	EYP01KT568J01
100	2200	35 x 50	2.6	0.12	0.080	0.040	60	EYP01CD422L01
100	3300	35 x 80	3.0	0.13	0.060	0.035	100	EYP01CJ433L01
100	4700	35 x 105	3.7	0.13	0.045	0.025	140	EYP01CM447L01
100	6800	50 x 80	5.2	0.14	0.035	0.020	200	EYP01EJ468L01
100	10000	50 x 105	7.5	0.12	0.020	0.010	280	EYP01EM510L01
100	15000	65 x 80	9.3	0.15	0.020	0.010	380	EYP01HJ515L01
100	22000	65 x 114	11.9	0.15	0.010	<0.010	560	EYP01H0522L01
100	33000	76 x 114	13.1	0.20	0.010	<0.010	800	EYP01K0533L01
160	470	35 x 50	2.2	0.08	0.270	0.105	50	EYP01CD347M02
160	680	35 x 60	2.7	0.08	0.185	0.075	70	EYP01CF368M02
160	1000	35 x 80	3.3	0.08	0.125	0.055	90	EYP01CJ410M02
160	1500	35 x 105	4.3	0.08	0.085	0.035	130	EYP01CM415M02
160	2200	50 x 80	6.2	0.08	0.060	0.025	180	EYP01EJ422M02
160	3300	50 x 105	7.8	0.08	0.040	0.020	260	EYP01EM433M02
160	4700	65 x 80	11.1	0.10	0.035	0.015	340	EYP01HJ447M02
160	6800	65 x 105	13.9	0.10	0.025	0.010	480	EYP01HM468M02
160	10000	76 x 114	17.1	0.10	0.015	0.010	710	EYP01K0510M02
200	470	35 x 50	2.2	0.09	0.305	0.160	60	EYP01CD347S02
200	680	35 x 60	2.7	0.09	0.210	0.115	70	EYP01CF368S02
200	1000	35 x 105	3.5	0.08	0.125	0.075	120	EYP01CM410S02
200	1500	50 x 80	5.4	0.09	0.095	0.050	170	EYP01EJ415S02
200	2200	50 x 80	6.9	0.10	0.070	0.035	210	EYP01EJ422S02
200	3300	50 x 114	8.9	0.10	0.050	0.025	310	EYP01E0433S02
200	4700	65 x 105	12.2	0.10	0.035	0.020	450	EYP01HM447S02
200	6800	76 x 105	15	0.10	0.025	0.015	630	EYP01KM468S02
250	330	35 x 50	1.9	0.08	0.385	0.180	50	EYP01CD333N02
250	470	35 x 60	2.4	0.08	0.270	0.130	70	EYP01CF347N02
250	680	35 x 80	3.0	0.08	0.185	0.090	100	EYP01CJ368N02
250	1000	35 x 105	3.8	0.08	0.125	0.060	130	EYP01CM410N02
250	1500	50 x 80	5.9	0.08	0.085	0.040	190	EYP01EJ415N02
250	2200	50 x 105	7.5	0.08	0.060	0.030	270	EYP01EM422N02
250	3300	65 x 105	10.7	0.08	0.040	0.020	430	EYP01HM433N02
250	4700	65 x 114	12.8	0.09	0.030	0.015	540	EYP01H0447N02
250	6800	76 x 144	16.6	0.09	0.020	0.010	830	EYP01KT468N02
350	220	35 x 50	1.6	0.09	0.650	0.305	50	EYP01CD322002
350	330	35 x 60	2.0	0.09	0.435	0.205	70	EYP01CF333002
350	470	35 x 80	2.5	0.09	0.305	0.145	90	EYP01CJ347002
350	680	35 x 105	3.1	0.09	0.210	0.100	130	EYP01CM368002
350	1000	50 x 80	4.7	0.09	0.145	0.070	190	EYP01EJ41 0002
350	1500	50 x 105	6.2	0.09	0.095	0.045	270	EYP01EM415002
350	2200	65 x 80	8.5	0.09	0.065	0.035	360	EYP01HJ422002
350	3300	65 x 114	11.1	0.09	0.045	0.025	540	EYP01H0433002
350	4700	76 x 144	14.3	0.09	0.030	0.015	830	EYP01KT447002

ELECTRICAL DATA AND ORDERING INFORMATION								
U_R (V)	C_R 100 Hz (μ F)	NOMINAL CASE SIZE $\varnothing D \times L$ (mm)	I_R 100 Hz 105 °C (A)	$\tan \delta$ 100 Hz	ESR 100 Hz (Ω)	Z 10 kHz (Ω)	WEIGHT (g)	CATALOG NUMBER EYP01
385	220	35 x 50	1.6	0.09	0.650	0.280	50	EYP01CD322R02
385	330	35 x 60	2.0	0.09	0.435	0.190	70	EYP01CF333R02
385	470	35 x 105	2.5	0.09	0.305	0.130	120	EYP01CM347R02
385	680	35 x 114	3.2	0.09	0.210	0.095	150	EYP01C0368R02
385	1000	50 x 80	4.9	0.09	0.145	0.065	200	EYP01EJ410R02
385	1500	50 x 105	6.3	0.09	0.095	0.045	290	EYP01EM415R02
385	2200	65 x 105	8.9	0.09	0.065	0.030	440	EYP01HM422R02
385	3300	76 x 105	11.6	0.09	0.045	0.020	630	EYP01KM433R02
385	4700	76 x 144	14.4	0.09	0.03	0.015	880	EYP01KT447R02
400	220	35 x 50	1.6	0.09	0.650	0.265	60	EYP01CD322X02
400	330	35 x 80	2.1	0.09	0.435	0.175	90	EYP01CJ333X02
400	470	35 x 105	2.5	0.09	0.305	0.125	120	EYP01CM347X02
400	680	50 x 80	3.8	0.09	0.210	0.085	170	EYP01EJ368X02
400	1000	50 x 105	4.8	0.09	0.145	0.060	240	EYP01EM410X02
400	1500	50 x 114	6.3	0.09	0.095	0.040	310	EYP01E0415X02
400	2200	65 x 105	8.9	0.09	0.065	0.030	460	EYP01HM422X02
400	3300	76 x 105	11.6	0.09	0.045	0.020	660	EYP01KM433X02
400	4700	76 x 144	14.4	0.09	0.030	0.015	920	EYP01KT447X02

LOW TEMPERATURE BEHAVIOUR

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_a (°C)	RATED VOLTAGE (V)												
	10	16	25	40	50	63	100	160	200	250	350	385	400
-25	11000	9000	6000	4000	3000	2000	1100	1800	1800	1800	1800	1500	1500
-40	38500	31500	21000	14000	10500	7000	3850	2100	6000	6000	6000	5000	5000

Note

In practical operation the lower limit of the series resistance and impedance is given by the ohmic part of the contact points and the foil resistance values. So it will not always be possible to achieve calculated values below 0.01 Ω .

LEAKAGE CURRENT

Formula for calculation of the maximum leakage current for acceptance tests I_L :
 (Test conditions: U_R , 20 °C, 5 minutes)

$$I_{L5} [\mu\text{A}] \leq 0.002 \cdot C_R [\mu\text{F}] \cdot U_R [\text{V}] \quad \text{for } U_R \leq 100\text{V}$$

$$I_{L5} [\mu\text{A}] \leq 0.015 \cdot C_R [\mu\text{F}] \cdot U_R [\text{V}] \quad \text{for } U_R > 100\text{V}$$

LIFETIME TABLE rated voltage ≤ 100 V

INTERRELATION BETWEEN ALTERNATING CURRENT, AMBIENT TEMPERATURE AND LIFETIME																		
I_R (FREQUENCY-DEPENDANT)						SURFACE TEMPERATURE RISE ΔT_O (°C)	LIFETIME MULTIPLIER L (DEPENDING ON I_R AND T_a)											
FREQUENCY (Hz)							AMBIENT TEMPERATURE T_a (°C)											
50	100	250	500	1000	>2500		40	50	60	65	70	75	80	85	90	95	100	105
0.19	0.20	0.21	0.22	0.23	0.23	0.1	195	79	34	23	15	10	7.2	5.0	3.5	2.5	1.81	1.31
0.38	0.40	0.42	0.44	0.46	0.47	0.4	182	74	32	22	15	9.9	6.9	4.8	3.4	2.4	1.74	1.26
0.56	0.60	0.64	0.66	0.69	0.70	0.8	163	68	30	20	13	9.3	6.4	4.5	3.2	2.3	1.63	1.19
0.75	0.80	0.85	0.88	0.91	0.93	1.3	142	60	26	18	12	8.4	5.8	4.1	2.9	2.1	1.51	1.10
0.94	1.00	1.06	1.10	1.14	1.17	2.0	120	52	23	16	11	7.5	5.2	3.7	2.6	1.9	1.36	1.00
1.13	1.20	1.27	1.33	1.37	1.40	2.5	99	43	20	13	9.3	6.5	4.6	3.2	2.3	1.7	1.21	
1.31	1.40	1.48	1.55	1.60	1.63	3.6	79	35	16	11	7.9	5.5	3.9	2.8	2.0	1.4	1.06	
1.50	1.60	1.70	1.77	1.83	1.87	4.8	62	28	13	9.3	6.5	4.6	3.3	2.4	1.7	1.2		
1.69	1.80	1.91	1.99	2.06	2.10	6.2	48	22	11	7.5	5.3	3.8	2.7	2.0	1.4	1.0		
1.88	2.00	2.12	2.21	2.28	2.33	7.7	36	17	8.5	6.0	4.3	3.1	2.2	1.6	1.2			
2.06	2.20	2.33	2.43	2.51	2.56	9.3	27	13	6.6	4.7	3.4	2.4	1.8	1.3				
2.25	2.40	2.54	2.65	2.74	2.8	11	20	9.8	5.0	3.6	2.6	1.9	1.4	1.0				
2.44	2.60	2.75	2.87	2.97	3.03	13	14	7.2	3.8	2.7	2.0	1.5	1.1					
2.63	2.80	2.97	3.09	3.20	3.26	15	10	5.2	2.8	2.0	1.5	1.1						
2.81	3.00	3.18	3.31	3.43	3.50	17	7.0	3.8	2.0	1.5	1.1							
3.00	3.20	3.39	3.54	3.65	3.73	19	4.8	2.7	1.5	1.1								
3.19	3.40	3.60	3.76	3.88	3.96	22	3.3	1.9	1.1									
3.38	3.60	3.81	3.98	4.11	4.20	24	2.2	1.3										
3.56	3.80	4.03	4.20	4.34	4.43	27	1.5											
3.75	4.00	4.24	4.42	4.57	4.66	30	1.0											

- I_R 100 Hz alternating current (A) at upper category temperature T_{UC} taken from data sheet.
- I User current (A).
- T_a Ambient temperature of capacitor (°C).
- ΔT_O Surface temperature rise of capacitor caused by AC load (°C).
- L Lifetime multiplier.

LIFETIME TABLE rated voltage > 100 V

INTERRELATION BETWEEN ALTERNATING CURRENT, AMBIENT TEMPERATURE AND LIFETIME																
I_R (FREQUENCY-DEPENDANT)						SURFACE TEMPERATURE RISE ΔT_O (°C)	LIFETIME MULTIPLIER L (DEPENDING ON I_R AND T_a)									
FREQUENCY (Hz)							AMBIENT TEMPERATURE T_a (°C)									
50	100	250	500	1000	>2500		40	45	50	55	60	65	70	75	80	85
0.16	0.20	0.26	0.29	0.31	0.33	0.2	103	65	42	28	18	12	8.2	5.6	2.6	1.81
0.31	0.40	0.51	0.58	0.62	0.65	0.8	88	57	37	24	16	11	7.4	3.4	2.4	1.65
0.47	0.60	0.77	0.86	0.93	0.98	1.6	69	46	30	20	14	9	6.3	2.9	2.0	1.44
0.62	0.80	1.02	1.15	1.24	1.30	2.8	51	34	23	16	11	7.4	5.1	2.4	1.7	1.20
0.78	1.00	1.28	1.44	1.55	1.63	4.2	36	25	17	12	8.2	5.7	2.7	1.9	1.3	1.00
0.94	1.20	1.53	1.73	1.86	1.96	6.6	24	17	12	8.4	5.9	4.2	2.0	1.4	1.0	
1.09	1.40	1.79	2.01	2.16	2.28	8.9	16	11	8.2	5.8	4.2	2.0	1.5	1.1		
1.25	1.60	2.04	2.30	2.47	2.61	11	10	7.4	5.4	3.9	1.9	1.4	1.0			
1.40	1.80	2.30	2.59	2.78	2.93	14	6.3	4.7	3.5	2.6	1.3					
1.56	2.00	2.56	2.88	3.09	3.26	17	3.8	2.9	1.5	1.1						
1.72	2.20	2.81	3.16	3.40	3.59	20	2.3	1.2								
1.87	2.40	3.07	3.45	3.71	3.91	24	1.0									

- I_R 100 Hz alternating current (A) at upper category temperature T_{UC} taken from data sheet.
- I User current (A).
- T_a Ambient temperature of capacitor (°C).
- ΔT_O Surface temperature rise of capacitor caused by AC load (°C).
- L Lifetime multiplier.



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