

ESK Aluminum Electrolytic Capacitors

SINGLE-ENDED LEADS - General purpose 85°C / 2000 h

Description

- Capacitors for high density printed circuit board.

Applications

- Coupling, decoupling, by-pass, filtering.

Features

- Case with $\varnothing D \geq 6.0$ mm has the safety vent at the bottom.

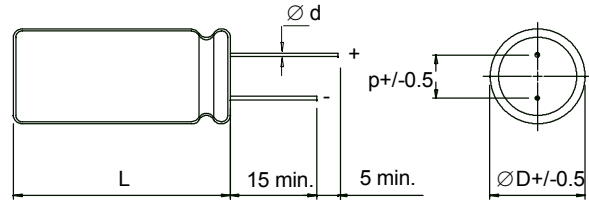
Diagram of dimensions (Unit = mm).

$\varnothing D$	5.0	6.0	8.0	10.0	13.0	16.0	18.0	22.0
p (pitch)	2.0	2.5	3.5	5.0		7.5	10.0	
$\varnothing d$ (leads)	0.5			0.6	0.8			0.8

* Case $\varnothing D$ 6.0mm: $D = +0.8/-0.5$

Marking

- logo:
Series (ESK), Operating temperature (85°C),
Rated capacitance (μF), Rated voltage (Vdc).
Negative polarity: white row



$$L \leq 12: L+1.5 \text{ max}$$

$$L \geq 13: L+2.0 \text{ max}$$

Electrical characteristics

Rated voltage	6.3 to 100 Vdc	160 to 450 Vdc
Operating temperature	-40 to +85°C	-25 to +85°C
Capacitance range	0.1 μF to 22000 μF .	0.47 μF to 470 μF .
Capacitance tolerance	$\pm 20\%$ at 120 Hz / 20°C	
Endurance test	2000 h (see conditions in Test method and performance)	
Leakage current	$I = 0.01 CV$ (μA) or 3 μA whichever is greater	$I = 0.03 CV$ (μA) + 10 μA
	C = rated capacitance (μF); V = rated voltage (Vdc) (after that DC rated voltage at 20°C has been applied for 2 min)	

Compensation factor of ripple current (R.C.) vs. frequency

Rated voltage	Capacitance range	50 Hz	120 Hz	300 Hz	1 kHz	10 to 100 kHz
6.3 to 100 Vdc	0.1 to 68 μF	0.75	1.00	1.20	1.30	1.45
6.3 to 100 Vdc	100 to 680 μF	0.75	1.00	1.10	1.15	1.25
6.3 to 100 Vdc	1000 to 22000 μF	0.75	1.00	1.05	1.10	1.15
160 to 450 Vdc	0.47 to 220 μF	0.80	1.00	1.25	1.40	1.40
160 to 450 Vdc	330 to 470 μF	0.80	1.00	1.10	1.13	1.15

Compensation factor of ripple current (R.C.) vs. temperature

Temperature	50°C	70°C	85°C
Multiplier factors	1.30	1.15	1.00

Test method and performance

Load life test	
Test conditions	
Voltage:	the sum of D.C. voltage and the peak A.C. voltage must not exceed the rated voltage of the capacitor.
Ripple current:	max permissible ripple current at 120Hz 85°C specified in the table.
Temperature:	85°C
Test duration:	2000 hours
Performance	
The following specifications will be satisfied when the capacitors are restored at 20°C.	
Capacitance Change:	within 20% of initial value
Dissipation Factor:	not exceed 200% of initial requirement
Leakage Current:	not exceed initial requirement

Shelf life test	
Test conditions	
Voltage:	no voltage applied.
Temperature:	85°C
Test duration:	1000 hours
Performance	
The following specifications will be satisfied when the capacitors are restored at 20°C.	
Capacitance Change:	within 20% of initial value
Dissipation Factor:	not exceed 200% of initial requirement
Leakage Current:	not exceed initial requirement

SINGLE-ENDED LEADS - General purpose 85°C / 2000 h

■ Technical data and ordering codes

6.3 Vdc Rated voltage - 8 Vdc Surge voltage					
Rated Cap. 120Hz 20°C (µF)	Case size D x L (mm)	D.F. 120Hz 25°C (tgδ %)	R.C. 120Hz 85°C (mA _{rms})	L.C. 20°C 2 min (µA)	P/N
22	5 x 11	22	35	3	ESK226M6R3AC3AA
33	5 x 11	22	55	3	ESK336M6R3AC3AA
47	5 x 11	22	75	3	ESK476M6R3AC3AA
100	5 x 11	22	130	6	ESK107M6R3AC3AA
220	5 x 11	22	200	14	ESK227M6R3AC3AA
220	6 x 11	22	240	14	ESK227M6R3AE3AA
330	6 x 11	22	260	21	ESK337M6R3AE3AA
330	8 x 11	22	300	21	ESK337M6R3AG3AA
470	6 x 11	22	330	30	ESK477M6R3AE3AA
470	8 x 11	22	380	30	ESK477M6R3AG3AA
1000	8 x 11	22	460	63	ESK108M6R3AG3AA
1000	10 x 12	22	580	63	ESK108M6R3AH1AA
2200	10 x 19	22	840	139	ESK228M6R3AH4AA
2200	13 x 20	22	1050	139	ESK228M6R3AL3AA
3300	10 x 19	22	1000	208	ESK338M6R3AH4AA
3300	13 x 20	22	1250	208	ESK338M6R3AL3AA
4700	13 x 20	22	1300	296	ESK478M6R3AL3AA
4700	16 x 25	22	1700	296	ESK478M6R3AM7AA
6800	16 x 25	22	1900	428	ESK688M6R3AM7AA
10000	16 x 25	22	1900	630	ESK109M6R3AM7AA
10000	16 x 32	22	2250	630	ESK109M6R3AM2AA
15000	16 x 36	22	2500	945	ESK159M6R3AM3AA
15000	18 x 36	22	2880	945	ESK159M6R3AN2AA
22000	18 x 40	22	3650	1386	ESK229M6R3AN3AA

10 Vdc Rated voltage - 13 Vdc Surge voltage					
Rated Cap. 120Hz 20°C (µF)	Case size D x L (mm)	D.F. 120Hz 25°C (tgδ %)	R.C. 120Hz 85°C (mA _{rms})	L.C. 20°C 2 min (µA)	P/N
4.7	5 x 11	19	20	3	ESK475M010AC3AA
10	5 x 11	19	35	3	ESK106M010AC3AA
22	5 x 11	19	55	3	ESK226M010AC3AA
33	5 x 11	19	80	3	ESK336M010AC3AA
47	5 x 11	19	95	5	ESK476M010AC3AA
100	5 x 11	19	180	10	ESK107M010AC3AA
220	5 x 11	19	230	22	ESK227M010AC3AA
220	6 x 11	19	250	22	ESK227M010AE3AA
330	8 x 11	19	330	33	ESK337M010AG3AA
470	6 x 11	19	360	47	ESK477M010AE3AA
470	8 x 11	19	400	47	ESK477M010AG3AA
680	8 x 15	19	430	68	ESK687M010AG4AA
680	10 x 15	19	460	68	ESK687M010AH2AA
1000	10 x 12	19	580	100	ESK108M010AH1AA
1000	10 x 15	19	630	100	ESK108M010AH2AA
2200	10 x 19	19	880	220	ESK228M010AH4AA
2200	13 x 20	19	1100	220	ESK228M010AL3AA
3300	13 x 20	19	1250	330	ESK338M010AL3AA
3300	13 x 25	19	1400	330	ESK338M010AL4AA
4700	13 x 25	19	1500	470	ESK478M010AL4AA
4700	16 x 25	19	1800	470	ESK478M010AM7AA
6800	16 x 25	19	1900	680	ESK688M010AM7AA
6800	16 x 32	19	2150	680	ESK688M010AM2AA
10000	16 x 36	19	2500	1000	ESK109M010AM3AA
10000	18 x 36	19	2500	1000	ESK109M010AN2AA
15000	18 x 36	19	2950	1500	ESK159M010AN2AA
22000	22 x 40	19	3700	2200	ESK229M010AQ4AA

16 Vdc Rated voltage - 20 Vdc Surge voltage					
Rated Cap. 120Hz 20°C (µF)	Case size D x L (mm)	D.F. 120Hz 25°C (tgδ %)	R.C. 120Hz 85°C (mA _{rms})	L.C. 20°C 2 min (µA)	P/N
1.0	5 x 11	16	9.3	3	ESK105M016AC3AA
4.7	5 x 11	16	25	3	ESK475M016AC3AA
10	5 x 11	16	40	3	ESK106M016AC3AA
22	5 x 11	16	75	4	ESK226M016AC3AA
33	5 x 11	16	110	5	ESK336M016AC3AA
47	5 x 11	16	130	7	ESK476M016AC3AA
100	5 x 11	16	185	16	ESK107M016AC3AA
100	6 x 11	16	185	16	ESK107M016AE3AA
220	6 x 11	16	320	35	ESK227M016AE3AA
220	8 x 11	16	320	35	ESK227M016AG3AA
330	8 x 11	16	360	53	ESK337M016AG3AA
470	8 x 11	16	400	75	ESK477M016AG3AA
470	10 x 12	16	470	75	ESK477M016AH1AA
680	10 x 15	16	560	109	ESK687M016AH2AA
1000	10 x 15	16	630	160	ESK108M016AH2AA
1000	10 x 19	16	790	160	ESK108M016AH4AA
2200	13 x 20	16	1100	352	ESK228M016AL3AA
2200	13 x 25	16	1350	352	ESK228M016AL4AA
3300	13 x 25	16	1400	528	ESK338M016AL4AA
3300	16 x 25	16	1700	528	ESK338M016AM7AA
4700	16 x 25	16	1800	752	ESK478M016AM7AA
4700	16 x 32	16	2100	752	ESK478M016AM2AA
6800	16 x 36	16	2200	1088	ESK688M016AM3AA
6800	18 x 36	16	2500	1088	ESK688M016AN2AA
10000	18 x 36	16	2700	1600	ESK109M016AN2AA
15000	22 x 40	16	3150	2400	ESK159M016AQ4AA
22000	22 x 40	16	3800	3520	ESK229M016AQ4AA

25 Vdc Rated voltage - 32 Vdc Surge voltage					
Rated Cap. 120Hz 20°C (µF)	Case size D x L (mm)	D.F. 120Hz 25°C (tgδ %)	R.C. 120Hz 85°C (mA _{rms})	L.C. 20°C 2 min (µA)	P/N
4.7	5 x 11	14	30	3	ESK475M025AC3AA
10	5 x 11	14	50	3	ESK106M025AC3AA
22	5 x 11	14	90	5	ESK226M025AC3AA
33	5 x 11	14	115	8	ESK336M025AC3AA
47	5 x 11	14	135	12	ESK476M025AC3AA
100	6 x 11	14	200	25	ESK107M025AE3AA
220	8 x 11	14	290	55	ESK227M025AG3AA
220	10 x 12	14	340	55	ESK227M025AH1AA
330	8 x 15	14	380	82	ESK337M025AG4AA
330	10 x 12	14	420	82	ESK337M025AH1AA
330	10 x 15	14	420	82	ESK337M025AH2AA
470	10 x 12	14	460	117	ESK477M025AH1AA
470	10 x 15	14	540	117	ESK477M025AH2AA
1000	10 x 19	14	760	250	ESK108M025AH4AA
1000	13 x 20	14	950	250	ESK108M025AL3AA
2200	13 x 25	14	1300	550	ESK228M025AL4AA
2200	16 x 25	14	1550	550	ESK228M025AM7AA
3300	16 x 25	14	1660	825	ESK338M025AM7AA
3300	16 x 32	14	1950	825	ESK338M025AM2AA
4700	16 x 32	14	1950	1175	ESK478M025AM2AA
4700	18 x 36	14	2360	1175	ESK478M025AN2AA
6800	18 x 36	14	2550	1700	ESK688M025AN2AA
10000	22 x 40	14	2800	2500	ESK109M025AQ4AA
15000	22 x 40	14	3200	3750	ESK159M025AQ4AA

For capacitor whose capacitance exceeds 1000 µF the value of D.F. (%) is increased by 2% for every addition of 1000 µF

SINGLE-ENDED LEADS - General purpose 85°C / 2000 h

35 Vdc Rated voltage - 44 Vdc Surge voltage					
Rated Cap. 120Hz 20°C (μ F)	Case size D x L (mm)	D.F. 120Hz 25°C (tg δ %)	R.C. 120Hz 85°C (mA _{rms})	L.C. 20°C 2 min (μ A)	P/N
4.7	5 x 11	12	35	3	ESK475M035AC3AA
10	5 x 11	12	60	3	ESK106M035AC3AA
22	5 x 11	12	95	8	ESK226M035AC3AA
33	5 x 11	12	120	11	ESK336M035AC3AA
47	5 x 11	12	120	16	ESK476M035AC3AA
47	6 x 11	12	140	16	ESK476M035AE3AA
100	6 x 11	12	200	35	ESK107M035AE3AA
100	8 x 11	12	230	35	ESK107M035AG3AA
220	8 x 11	12	290	77	ESK227M035AG3AA
220	10 x 12	12	370	77	ESK227M035AH1AA
330	10 x 12	12	420	115	ESK337M035AH1AA
330	10 x 15	12	490	115	ESK337M035AH2AA
470	10 x 15	12	480	164	ESK477M035AH2AA
470	10 x 19	12	510	164	ESK477M035AH4AA
470	13 x 20	12	640	164	ESK477M035AL3AA
1000	13 x 20	12	950	350	ESK108M035AL3AA
1000	13 x 25	12	1100	350	ESK108M035AL4AA
2200	16 x 25	12	1600	770	ESK228M035AM7AA
2200	16 x 32	12	1800	770	ESK228M035AM2AA
3300	16 x 36	12	1970	1155	ESK338M035AM3AA
3300	18 x 36	12	2220	1155	ESK338M035AN2AA
4700	18 x 36	12	2400	1645	ESK478M035AN2AA
6800	22 x 40	12	2600	2380	ESK688M035AQ4AA

50 Vdc Rated voltage - 63 Vdc Surge voltage					
Rated Cap. 120Hz 20°C (μ F)	Case size D x L (mm)	D.F. 120Hz 25°C (tg δ %)	R.C. 120Hz 85°C (mA _{rms})	L.C. 20°C 2 min (μ A)	P/N
0.1	5 x 11	10	1	3	ESK104M050AC3AA
0.22	5 x 11	10	2	3	ESK224M050AC3AA
0.33	5 x 11	10	3	3	ESK334M050AC3AA
0.47	5 x 11	10	5	3	ESK474M050AC3AA
1.0	5 x 11	10	10	3	ESK105M050AC3AA
2.2	5 x 11	10	23	3	ESK225M050AC3AA
3.3	5 x 11	10	35	3	ESK335M050AC3AA
4.7	5 x 11	10	40	3	ESK475M050AC3AA
10	5 x 11	10	65	5	ESK106M050AC3AA
22	5 x 11	10	100	11	ESK226M050AC3AA
33	6 x 11	10	125	16	ESK336M050AE3AA
47	6 x 11	10	140	23	ESK476M050AE3AA
47	8 x 11	10	150	23	ESK476M050AG3AA
100	8 x 11	10	230	50	ESK107M050AG3AA
100	10 x 12	10	250	50	ESK107M050AH1AA
220	10 x 12	10	380	110	ESK227M050AH1AA
220	10 x 15	10	440	110	ESK227M050AH2AA
330	10 x 15	10	490	165	ESK337M050AH2AA
330	10 x 19	10	580	165	ESK337M050AH4AA
470	10 x 19	10	610	235	ESK477M050AH4AA
470	13 x 20	10	760	235	ESK477M050AL3AA
1000	13 x 25	10	1100	500	ESK108M050AL4AA
1000	16 x 25	10	1350	500	ESK108M050AM7AA
2200	16 x 36	10	1850	1100	ESK228M050AM3AA
2200	18 x 36	10	2090	1100	ESK228M050AN2AA
3300	18 x 36	10	2170	1650	ESK338M050AN2AA
3300	18 x 40	10	2400	1650	ESK338M050AN3AA
4700	22 x 35	10	2500	2350	ESK478M050AQ3AA
4700	22 x 40	10	2500	2350	ESK478M050AQ4AA

63 Vdc Rated voltage - 79 Vdc Surge voltage					
Rated Cap. 120Hz 20°C (μ F)	Case size D x L (mm)	D.F. 120Hz 25°C (tg δ %)	R.C. 120Hz 85°C (mA _{rms})	L.C. 20°C 2 min (μ A)	P/N
0.47	5 x 11	9	5	3	ESK474M063AC3AA
1.0	5 x 11	9	10	3	ESK105M063AC3AA
2.2	5 x 11	9	29	3	ESK225M063AC3AA
3.3	5 x 11	9	40	3	ESK335M063AC3AA
4.7	5 x 11	9	45	3	ESK475M063AC3AA
10	5 x 11	9	70	6	ESK106M063AC3AA
22	6 x 11	9	115	14	ESK226M063AE3AA
33	6 x 11	9	130	21	ESK336M063AE3AA
33	8 x 11	9	140	21	ESK336M063AG3AA
47	6 x 11	9	190	30	ESK476M063AE3AA
47	8 x 11	9	190	30	ESK476M063AG3AA
100	10 x 12	9	300	63	ESK107M063AH1AA
220	10 x 15	9	410	139	ESK227M063AH2AA
220	10 x 19	9	490	139	ESK227M063AH4AA
330	10 x 19	9	540	208	ESK337M063AH4AA
330	13 x 20	9	680	208	ESK337M063AL3AA
470	13 x 25	9	880	296	ESK477M063AL4AA
1000	16 x 25	9	1310	630	ESK108M063AM7AA
1000	16 x 32	9	1550	630	ESK108M063AM2AA
2200	18 x 40	9	2200	1386	ESK228M063AN3AA
3300	22 x 40	9	2500	2079	ESK338M063AQ4AA

100 Vdc Rated voltage - 125 Vdc Surge voltage					
Rated Cap. 120Hz 20°C (μ F)	Case size D x L (mm)	D.F. 120Hz 25°C (tg δ %)	R.C. 120Hz 85°C (mA _{rms})	L.C. 20°C 2 min (μ A)	P/N
0.47	5 x 11	8	10	3	ESK474M100AC3AA
1.0	5 x 11	8	21	3	ESK105M100AC3AA
2.2	5 x 11	8	30	3	ESK225M100AC3AA
3.3	5 x 11	8	45	3	ESK335M100AC3AA
4.7	5 x 11	8	50	5	ESK475M100AC3AA
10	6 x 11	8	75	10	ESK106M100AE3AA
22	8 x 11	8	130	12	ESK226M100AG3AA
33	8 x 11	8	140	33	ESK336M100AG3AA
33	10 x 12	8	170	33	ESK336M100AH1AA
47	10 x 12	8	190	47	ESK476M100AH1AA
47	10 x 15	8	230	47	ESK476M100AH2AA
100	10 x 19	8	400	160	ESK107M100AH4AA
220	13 x 25	8	710	220	ESK227M100AL4AA
330	13 x 25	8	720	330	ESK337M100AL4AA
330	16 x 25	8	860	330	ESK337M100AM7AA
470	16 x 25	8	1100	470	ESK477M100AM7AA
1000	16 x 32	8	1350	1000	ESK108M100AM2AA
1000	18 x 40	8	1680	1000	ESK108M100AN3AA
2200	22 x 40	8	2300	2200	ESK228M100AQ4AA

For capacitor whose capacitance exceeds 1000 μ F the value of D.F. (%) is increased by 2% for every addition of 1000 μ F

SINGLE-ENDED LEADS - General purpose 85°C / 2000 h

160 Vdc Rated voltage - 200 Vdc Surge voltage					
Rated Cap. 120Hz 20°C (μF)	Case size D x L (mm)	D.F. 120Hz 25°C (tgδ %)	R.C. 120Hz 85°C (mA _{rms})	L.C. 20°C 2 min (μA)	P/N
0.47	5 x 11	15	12	12	ESK474M160AC3AA
1.0	5 x 11	15	17	15	ESK105M160AC3AA
2.2	6 x 11	15	26	20	ESK225M160AE3AA
3.3	6 x 11	15	30	26	ESK335M160AE3AA
3.3	8 x 11	15	35	26	ESK335M160AG3AA
4.7	6 x 11	15	32	32	ESK475M160AE3AA
4.7	8 x 11	15	40	32	ESK475M160AG3AA
10	8 x 11	15	50	58	ESK106M160AG3AA
10	10 x 12	15	65	58	ESK106M160AH1AA
22	10 x 15	15	110	116	ESK226M160AH2AA
33	10 x 19	15	150	168	ESK336M160AH4AA
47	13 x 20	15	180	236	ESK476M160AL3AA
100	13 x 25	15	250	490	ESK107M160AL4AA
100	16 x 25	15	300	490	ESK107M160AM7AA
220	16 x 32	15	450	1066	ESK227M160AM2AA
220	16 x 36	15	510	1066	ESK227M160AM3AA
330	18 x 36	15	540	1594	ESK337M160AN2AA
330	18 x 40	15	600	1594	ESK337M160AN3AA
470	22 x 40	15	900	2266	ESK477M160AQ4AA

200 Vdc Rated voltage - 250 Vdc Surge voltage					
Rated Cap. 120Hz 20°C (μF)	Case size D x L (mm)	D.F. 120Hz 25°C (tgδ %)	R.C. 120Hz 85°C (mA _{rms})	L.C. 20°C 2 min (μA)	P/N
0.47	5 x 11	15	14	13	ESK474M200AC3AA
1.0	5 x 11	15	19	16	ESK105M200AC3AA
2.2	6 x 11	15	22	23	ESK225M200AE3AA
2.2	8 x 11	15	27	23	ESK225M200AG3AA
3.3	6 x 11	15	30	30	ESK335M200AE3AA
3.3	8 x 11	15	37	30	ESK335M200AG3AA
4.7	8 x 11	15	36	38	ESK475M200AG3AA
4.7	10 x 12	15	45	38	ESK475M200AH1AA
10	10 x 12	15	57	70	ESK106M200AH1AA
10	10 x 15	15	70	70	ESK106M200AH2AA
22	10 x 15	15	120	142	ESK226M200AH2AA
33	10 x 19	15	160	208	ESK336M200AH4AA
47	13 x 20	15	160	292	ESK476M200AL3AA
47	13 x 25	15	190	292	ESK476M200AL4AA
100	16 x 25	15	330	610	ESK107M200AM7AA
220	18 x 32	15	600	1330	ESK227M200AN1AA
220	18 x 36	15	600	1330	ESK227M200AN2AA
330	18 x 36	15	800	1990	ESK337M200AN2AA
330	18 x 40	15	800	1990	ESK337M200AN3AA
470	18 x 40	15	1000	2830	ESK477M200AN3AA

250 Vdc Rated voltage - 300 Vdc Surge voltage					
Rated Cap. 120Hz 20°C (μF)	Case size D x L (mm)	D.F. 120Hz 25°C (tgδ %)	R.C. 120Hz 85°C (mA _{rms})	L.C. 20°C 2 min (μA)	P/N
0.47	5 x 11	15	14	13	ESK474M250AC3AA
1.0	6 x 11	15	19	17	ESK105M250AE3AA
2.2	6 x 11	15	24	26	ESK225M250AE3AA
2.2	8 x 11	15	30	26	ESK225M250AG3AA
3.3	8 x 11	15	30	35	ESK335M250AG3AA
3.3	10 x 12	15	38	35	ESK335M250AH1AA
4.7	8 x 11	15	36	45	ESK475M250AG3AA
4.7	10 x 12	15	45	45	ESK475M250AH1AA
10	10 x 12	15	70	85	ESK106M250AH1AA
10	10 x 15	15	70	85	ESK106M250AH2AA
22	10 x 19	15	130	175	ESK226M250AH4AA
33	13 x 20	15	140	257	ESK336M250AL3AA
33	13 x 25	15	160	257	ESK336M250AL4AA
47	13 x 25	15	210	362	ESK476M250AL4AA
100	16 x 32	15	310	760	ESK107M250AM2AA
220	18 x 40	15	600	1660	ESK227M250AN3AA

350 Vdc Rated voltage - 400 Vdc Surge voltage					
Rated Cap. 120Hz 20°C (μF)	Case size D x L (mm)	D.F. 120Hz 25°C (tgδ %)	R.C. 120Hz 85°C (mA _{rms})	L.C. 20°C 2 min (μA)	P/N
0.47	5 x 11	20	14	15	ESK474M350AC3AA
1.0	6 x 11	20	19	20	ESK105M350AE3AA
2.2	8 x 11	20	33	33	ESK225M350AG3AA
3.3	8 x 11	20	33	45	ESK335M350AG3AA
3.3	10 x 12	20	39	45	ESK335M350AH1AA
4.7	10 x 12	20	39	59	ESK475M350AH1AA
4.7	10 x 15	20	45	59	ESK475M350AH2AA
10	10 x 15	20	70	115	ESK106M350AH2AA
22	13 x 20	20	130	241	ESK226M350AL3AA
33	13 x 25	20	170	356	ESK336M350AL4AA
47	16 x 25	20	220	503	ESK476M350AM7AA
100	18 x 36	20	360	1060	ESK107M350AN2AA

400 Vdc Rated voltage - 450 Vdc Surge voltage					
Rated Cap. 120Hz 20°C (μF)	Case size D x L (mm)	D.F. 120Hz 25°C (tgδ %)	R.C. 120Hz 85°C (mA _{rms})	L.C. 20°C 2 min (μA)	P/N
0.47	6 x 11	20	14	16	ESK474M400AE3AA
1.0	6 x 11	20	19	22	ESK105M400AE3AA
1.0	8 x 11	20	19	22	ESK105M400AG3AA
2.2	8 x 11	20	26	36	ESK225M400AG3AA
2.2	10 x 12	20	33	36	ESK225M400AH1AA
3.3	10 x 12	20	40	50	ESK335M400AH1AA
4.7	10 x 15	20	45	66	ESK475M400AH2AA
10	10 x 19	20	56	130	ESK106M400AH4AA
10	13 x 20	20	70	130	ESK106M400AL3AA
22	13 x 25	20	110	274	ESK226M400AL4AA
22	16 x 25	20	130	274	ESK226M400AM7AA
33	16 x 25	20	170	406	ESK336M400AM7AA
33	18 x 20	20	130	406	ESK336M400AN4AA
47	16 x 25	20	180	574	ESK476M400AM7AA
47	16 x 32	20	220	574	ESK476M400AM2AA
100	18 x 36	20	360	1210	ESK107M400AN2AA

450 Vdc Rated voltage - 500 Vdc Surge voltage					
Rated Cap. 120Hz 20°C (μF)	Case size D x L (mm)	D.F. 120Hz 25°C (tgδ %)	R.C. 120Hz 85°C (mA _{rms})	L.C. 20°C 2 min (μA)	P/N
0.47	6 x 11	20	14	16	ESK474M450AE3AA
1.0	8 x 11	20	19	23	ESK105M450AG3AA
2.2	10 x 12	20	33	40	ESK225M450AH1AA
3.3	10 x 15	20	42	54	ESK335M450AH2AA
4.7	10 x 15	20	50	73	ESK475M450AH2AA
10	13 x 20	20	60	145	ESK106M450AL3AA
10	13 x 25	20	75	145	ESK106M450AL4AA
22	16 x 25	20	130	307	ESK226M450AM7AA
33	16 x 32	20	160	455	ESK336M450AM2AA
33	16 x 36	20	180	455	ESK336M450AM3AA
47	18 x 36	20	200	644	ESK476M450AN2AA
47	18 x 40	20	230	644	ESK476M450AN3AA
100	22 x 40	20	370	1360	ESK107M450AQ4AA