

YA SERIES ■ ECONOMY, LONG LIFE 10000 HOURS TYPE

KEY FEATURES



- **HYBRID CONDUCTIVE POLYMER** ■ SMD type
- Endurance: 105°C ■ 10000 hours
- Low ESR and high ripple current
- Economy series for cost effective applications
- Lower leakage current than comparable solid polymer capacitors



SPECIFICATIONS

Items		Performance Characteristics
Operating Temperature Range		-55 ~ +105°C
Rated Voltage Range	V_R	16 ~ 100V DC
Surge Voltage	V_S	($V_R \leq 100V$): $V_S = 1.25 \cdot V_R$
Capacitance Range	C_R	10 ~ 1500μF
Cap. Tolerance	ΔC	±20% (120Hz ■ 20°C)
Leakage Current (20°C ■ V_R applied)	I_{LEAK}	Not to exceed the values shown in standard ratings After 2 minutes
Dissipation Factor % (20°C ■ 120Hz)	$\tan \delta$	Not to exceed the values shown in standard ratings
Equivalent Series Resistance (20°C ■ 100kHz)	ESR	Not to exceed the values shown in standard ratings
Lifetime Test		
Endurance 105°C (V_R & I_R applied)	Test	10000 hours
	$\Delta C/C_R$	Within ±30% of the initial value
	$\tan \delta$	Less than 200% of the specified value
	ESR	Less than 200% of the specified value
	I_{Leak}	Less than the specified value

MULTIPLIER K_f for RIPPLE CURRENT vs. FREQUENCY

Frequency (Hz)	100 ≤ Freq. < 120	120 ≤ Freq. < 200	200 ≤ Freq. < 300	300 ≤ Freq. < 500
Coefficient K_f	0.10	0.10	0.10	0.15
Frequency (Hz)	500 ≤ Freq. < 1k	1k ≤ Freq. < 2k	2k ≤ Freq. < 3k	3k ≤ Freq. < 5k
Coefficient K_f	0.20	0.30	0.40	0.45
Frequency (Hz)	5k ≤ Freq. < 10k	10k ≤ Freq. < 15k	15k ≤ Freq. < 20k	20k ≤ Freq. < 40k
Coefficient K_f	0.50	0.60	0.65	0.75
Frequency (Hz)	40k ≤ Freq. < 50k	50k ≤ Freq. < 100k	100k ≤ Freq. < 500k	500k ≤ Freq. < 1M
Coefficient K_f	0.80	0.85	1.00	1.05

STANDARD RATINGS

Part number shows blister tape on paper reel

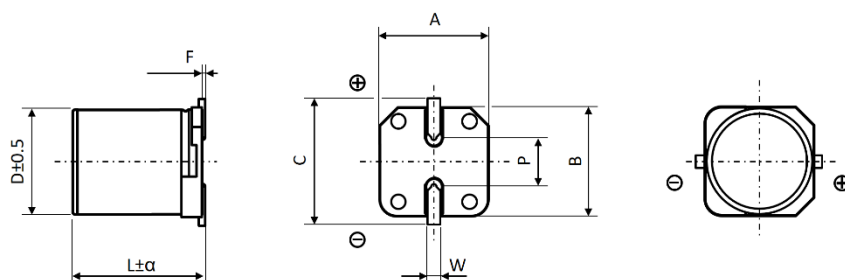
V_R (V)	C_R (μF)	$\varnothing D$ (mm)	L (mm)	I_{LEAK} (μA , 2min)	$\tan \delta$ +20°C • 120Hz (%)	Max. ESR +20°C • 100kHz (m Ω)	I_R • Max. Ripple Current +105°C • 100kHz (mA rms)	CapXon Part Number
16	100	6.3	5.8	16.0	16	50	1300	YA101M016E058PTR
	120	6.3	5.8	19.2	16	50	1300	YA121M016E058PTR
	150	6.3	5.8	24.0	16	50	1300	YA151M016E058PTR
	220	6.3	7.7	35.2	16	30	2000	YA221M016E077PTR
	270	6.3	7.7	43.2	16	30	2000	YA271M016E077PTR
	330	10.0	10.5	52.8	16	20	2500	YA331M016G105PTR
	470	8.0	10.5	75.2	16	27	2300	YA471M016F105PTR
	470	10.0	10.5	75.2	16	20	2500	YA471M016G105PTR
	560	8.0	11.7	89.6	16	23	2400	YA561M016F117PTR
	560	10.0	10.5	89.6	16	20	2500	YA561M016G105PTR
	820	10.0	12.4	131.2	16	16	2800	YA821M016G124PTR
	1500	10.0	16.5	240.0	16	11	5000	YA152M016G165PTR
25	33	5.0	5.8	8.3	14	80	900	YA330M025C058PTR
	56	6.3	5.8	14.0	14	50	1300	YA560M025E058PTR
	100	6.3	7.7	25.0	14	30	2000	YA101M025E077PTR
	220	8.0	10.5	55.0	14	27	2300	YA221M025F105PTR
	270	8.0	11.7	67.5	14	25	2400	YA271M025F117PTR
	330	10.0	10.5	82.5	14	20	2500	YA331M025G105PTR
	470	10.0	12.4	117.5	14	16	2800	YA471M025G124PTR
	560	10.0	16.5	140.0	14	11	5000	YA561M025G165PTR
35	22	5.0	5.8	7.7	12	100	900	YA220M035C058PTR
	27	6.3	5.8	9.5	12	60	1300	YA270M035E058PTR
	47	6.3	5.8	16.5	12	60	1300	YA470M035E058PTR
	68	6.3	7.7	23.8	12	35	2000	YA680M035E077PTR
	100	8.0	10.5	35.0	12	27	2300	YA101M035F105PTR
	150	8.0	10.5	52.5	12	27	2300	YA151M035F105PTR
	180	8.0	11.7	63.0	12	25	2400	YA181M035F117PTR
	270	10.0	10.5	94.5	12	20	2500	YA271M035G105PTR
	330	10.0	12.4	115.5	12	17	2800	YA331M035G124PTR
	470	10.0	16.5	164.5	12	11	5000	YA471M035G165PTR
50	10	5.0	5.8	5.0	10	120	750	YA100M050C058PTR
	22	6.3	5.8	11.0	10	80	1100	YA220M050E058PTR
	33	6.3	7.7	16.5	10	40	1600	YA330M050E077PTR
	56	10.0	10.5	28.0	10	28	2000	YA680M050F105PTR
	68	8.0	10.5	34.0	10	30	1800	YA820M050F117PTR
	82	8.0	11.7	41.0	10	28	1880	YA680M050G105PTR
	100	10.0	10.5	50.0	10	28	2000	YA101M050G105PTR
	120	10.0	12.4	60.0	10	25	2200	YA121M050G124PTR
	220	10.0	16.5	110.0	10	13	4600	YA221M050G165PTR

STANDARD RATINGS

Part number shows blister tape on paper reel

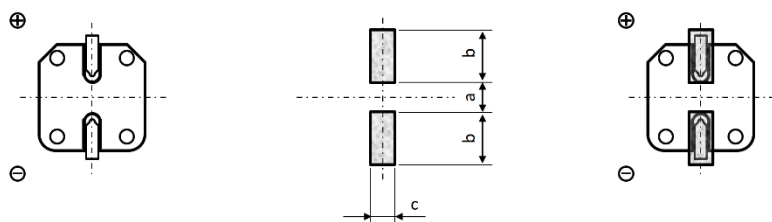
V_R (V)	C_R (μF)	ϕD (mm)	L (mm)	I_{LEAK} (μA , 2min)	$\tan\delta$ +20°C • 120Hz (%)	Max. ESR +20°C • 100kHz (m Ω)	I_R • Max. Ripple Current +105°C • 100kHz (mA rms)	CapXon Part Number
63	10	6.3	5.8	6.3	8	120	1000	YA100M063E058PTR
	22	6.3	7.7	13.9	8	80	1500	YA220M063E077PTR
	33	8.0	10.5	20.8	8	40	1700	YA330M063F105PTR
	47	8.0	10.5	29.6	8	40	1700	YA470M063F105PTR
	47	8.0	11.7	29.6	8	38	1750	YA470M063F117PTR
	56	10.0	10.5	35.3	8	30	1800	YA560M063G105PTR
	68	10.0	10.5	42.8	8	30	1800	YA680M063G105PTR
	82	10.0	12.4	51.7	8	22	2100	YA820M063G124PTR
	150	10.0	16.5	94.5	8	15	4350	YA151M063G165PTR
80	22	8.0	10.5	17.6	8	45	1550	YA220M080F105PTR
	27	8.0	11.7	21.6	8	43	1600	YA270M080F117PTR
	33	10.0	10.5	26.4	8	36	1700	YA330M080G105PTR
	47	10.0	10.5	37.6	8	36	1700	YA470M080G105PTR
	56	10.0	12.4	44.8	8	32	1800	YA560M080G124PTR
100	22	8.0	10.5	22.0	8	55	1400	YA220M100F105PTR
	22	8.0	11.7	22.0	8	52	1450	YA220M100F117PTR
	22	10.0	10.5	22.0	8	45	1500	YA220M100G105PTR
	27	10.0	12.4	27.0	8	40	1600	YA270M100G124PTR
	33	10.0	12.4	33.0	8	40	1600	YA330M100G124PTR

DIMENSIONS STANDARD PACKAGE ▪ All dimensions in mm



ϕD	L	α	A ± 0.2	B ± 0.2	C ± 0.2	F	P ± 0.2	W
5.0	5.8	0.3	5.3	5.3	5.9	0.3 max.	1.4	0.5 to 0.8
6.3	5.8	0.3	6.6	6.6	7.2	0.3 max.	2.2	0.5 to 0.8
6.3	7.7	0.3	6.6	6.6	7.2	0.3 max.	2.2	0.5 to 0.8
8.0	10.5	0.3	8.3	8.3	9.0	0.3 max.	3.1	0.7 to 1.1
8.0	11.7	0.3	8.3	8.3	9.0	0.3 max.	3.1	0.7 to 1.1
10.0	10.5	0.3	10.3	10.3	11.0	0.3 max.	4.5	0.7 to 1.1
10.0	12.4	0.3	10.3	10.3	11.0	0.3 max.	4.5	1.0 to 1.4
10.0	16.5	0.3	10.3	10.3	11.0	0.3 max.	4.5	1.0 to 1.4

PAD LAYOUT STANDARD PACKAGE ▀ All dimensions in mm



Bottom view

Recommended land patterns

Capacitor mounted on pads

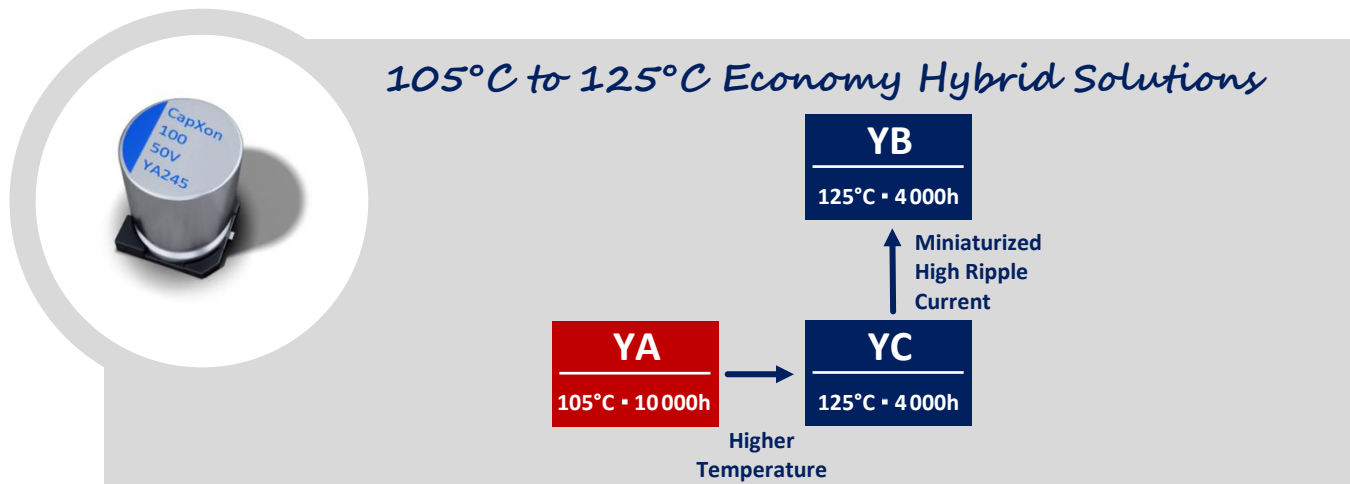
∅ D	L	a	b	c
5.0	5.8	1.4	3.0	1.6
6.3	5.8	2.1	3.5	1.6
6.3	7.7	2.1	3.5	1.6
8.0	10.5	2.8	4.2	1.9
8.0	11.7	2.8	4.2	1.9
10.0	10.5	4.3	4.4	1.9
10.0	12.4	4.3	4.4	1.9
10.0	16.5	4.3	4.4	1.9

PRECAUTIONS, GUIDELINES AND PACKAGING INFORMATION

Unless otherwise agreed in individual specifications, all products are subject to our “General Precautions and Guidelines” as well as our “Packaging Information”. Please refer to the following links in the table.

General Precautions & Guidelines	Packaging Information	Vibration Test Profiles	3D Models	Reliability Tests

GROUP CHART



DISCLAIMER

All product related data (e.g. specification, statements and general information) are subject to change without any notice. It is necessary that the customer observes all product related technical / application information and handling instructions.

CapXon products are designed and manufactured according to severe quality and safety standards. Under no circumstance, CapXon warrants that any CapXon product is suitable for the purposes intended for your application, even CapXon knows the application. It is customer's duty and obligation to check and make sure that CapXon products are suitable for the purposes intended and select the correct and proper CapXon product. Customers are requested to perform a sufficient validation and reliability evaluation to assure needed safety level and reliability performance by suitable designs and to apply proper safeguards (e.g. redundancies, protective circuits).

Particular operating conditions (ambient temperature, ripple current, voltage, thermal resistance, etc.) as well as storage, production or assembly may affect the performance and the lifetime of the capacitor. Please consult CapXon for lifetime estimation, failure mode considerations or worst-case scenarios according to the product technology, product tolerances / deviations or change of the characteristics of the capacitor due to shipment, storage, handling, production and usage.

For aerospace or military application, life-saving, life-sustaining, safety critical applications or any application where failure may cause severe personal injury or death, please consult us before design-in the capacitor in your application.

Except for the written expressed warranties, CapXon does not impliedly, by assumption or whatever else, warrant, undertake, promise any other warranty or guaranty for any CapXon product.

For further information, please visit our website www.capxongroup.com or contact CapXon directly.