AL SERIES ▪ HIGH TEMPERATURE TYPE 145°C

KEY FEATURES

AEC-Q 200 · °C HIGH TEMPERATURE

- **HYBRID CONDUCTIVE POLYMER** ▪ THT type
- Endurance: 145°C ▪ 2 000 hours
- Low ESR and high ripple current
  Superior electrical stability over application lifetime
- AEC-Q200 version available

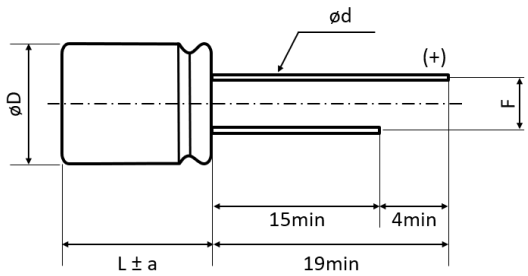
RoHS & REACH COMPLIANT

SPECIFICATIONS

Items		Performance Characteristics
Operating Temperature Range		-55 ~ +145°C
Rated Voltage Range	V_R	16 ~ 80V DC
Surge Voltage	V_S	($V_R \le 100V$): $V_S = 1.25 \cdot V_R$
Capacitance Range	C_R	8.2 ~ 560µF
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)	tanδ	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 145°C (V_R & I_R applied)	Test	**2 000 hours**
	$\triangle C/C_R$	Within ±30% of the initial value
	tanδ	Less than 200% of the specified value
	ESR	Less than 200% of the specified value
	I_{Leak}	Less than the specified value

DIMENSIONS ▪ All dimensions in mm



ø D	L	ØD±0.5	a	F±0.5	Ød±0.05
8	9	8	1.5	3.5	0.6
8	11.5	8	1.5	3.5	0.6
10	10	10	1.5	5	0.6
10	12.5	10	1.5	5	0.6

MULTIPLIER K_f for RIPPLE CURRENT vs. FREQUENCY

Frequency (Hz)	120 ≤ Freq. < 1k	1k ≤ Freq. < 10k	10k ≤ Freq. < 100k	100k ≤ Freq. < 300k
Coefficient K_f	0.1	0.3	0.6	1

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STANDARD RATINGS

V_R (V)	C_R (µF)	ø D (mm)	L (mm)	I_{LEAK} (µA, 2min)	tanδ +20°C ▪ 120Hz (%)	Max. ESR +20°C ▪ 100kHz (mΩ)	I_R ▪ Max. Ripple Current +145°C ▪ 100kHz (mA rms)	CapXon Part Number
16	270	8	9	43.2	16	25	780	AL271M016F090PTD ☐
	330	8	11.5	52.8	16	23	950	AL331M016F115PTD ☐
	470	10	10	75.2	16	20	1050	AL471M016G100PTA ☐
	560	10	12.5	89.6	16	16	1220	AL561M016G125PTA ☐
25	150	8	9	37.5	16	27	750	AL151M025F090PTD ☐
	220	8	11.5	55	16	25	900	AL221M025F115PTD ☐
	270	10	10	67.5	16	22	1000	AL271M025G100PTA ☐
	330	10	12.5	82.5	16	16	1150	AL331M025G125PTA ☐
35	100	8	9	16.5	16	30	700	AL101M035F090PTD ☐
	150	8	11.5	35	16	27	850	AL151M035F115PTD ☐
	150	10	10	52.5	16	23	950	AL151M035G100PTA ☐
	220	10	12.5	77	16	18	1100	AL221M035G125PTA ☐
40	56	8	9	22.4	16	30	660	AL560M040F090PTD ☐
	82	8	11.5	32.8	16	27	800	AL820M040F115PTD ☐
	100	10	10	40	16	25	920	AL101M040G100PTA ☐
	120	10	10	48	16	23	920	AL121M040G100PTA ☐
	180	10	12.5	48	16	20	1040	AL181M040G125PTA ☐
50	33	8	9	16.5	16	35	620	AL330M050F090PTD ☐
	47	8	11.5	23.5	16	28	730	AL570M050F115PTD ☐
	56	10	10	28	16	28	880	AL560M050G100PTA ☐
	82	10	12.5	41	16	25	1040	AL820M050G125PTA ☐
63	22	8	9	13.9	16	40	600	AL220M063F090PTD ☐
	27	8	11.5	17	16	35	700	AL270M063F115PTD ☐
	33	10	10	20.8	16	30	850	AL330M063G100PTA ☐
	47	10	10	29.6	16	30	850	AL470M063G100PTA ☐
	56	10	12.5	35.3	16	25	950	AL560M063G125PTA ☐
80	8.2	8	9	6.6	16	90	450	AL8R2M080F090PTD ☐
	12	10	10	9.6	16	70	650	AL120M080G100PTA ☐
	15	8	11.5	12	16	70	550	AL150M080F115PTD ☐
	15	10	10	12	16	70	650	AL150M080G100PTA ☐
	15	10	12.5	14.4	16	50	750	AL180M080G100PTA ☐

☐: Leave **blank** for Standard type ☐: Enter **X** for AEC-Q200 type

Part number shows taped version with straight leads and Ammo Pack packaging.

See "PACKAGING INFORMATION" for further lead treatment options.

PRECAUTIONS, GUIDELINES AND PACKAGING INFORMATON

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	3D Models

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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.

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