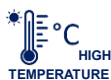


AE SERIES ■ HIGH RIPPLE CURRENT TYPE

KEY FEATURES



AEC-Q200



TEMPERATURE HIGH



HIGH RIPPLE

- **HYBRID CONDUCTIVE POLYMER • THT type**
- Endurance: 135°C ■ 4 000 hours
- Ultra-low ESR and highest ripple current
- Superior electrical stability over application lifetime
- AEC-Q200 version available

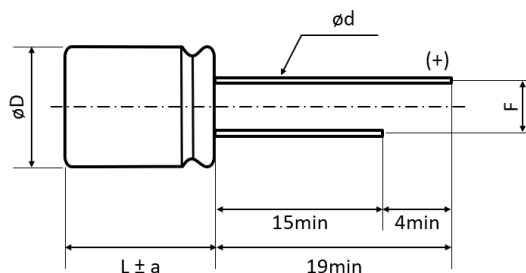


SPECIFICATIONS

Items		Performance Characteristics
Operating Temperature Range		-55 ~ +135°C
Rated Voltage Range	V_R	25 ~ 100V DC
Surge Voltage	V_S	($V_R \leq 100V$): $V_S = 1.25 \cdot V_R$
Capacitance Range	C_R	22 ~ 680 μ F
Cap. Tolerance	ΔC	$\pm 20\%$ (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 135°C (V_R & I_R applied)	Test	4 000 hours
	$\Delta C/C_R$	Within $\pm 30\%$ 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

DIMENSIONS ■ All dimensions in mm



ϕD	L	$\phi D \pm 0.5$	a	F ± 0.5	$\phi d \pm 0.05$
10.0	12.5	10	1.5	5	0.8
10.0	16.0	10	2.0	5	0.8

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 • 100kHz (mA rms)		CapXon Part Number
							+125°C	+135°C	
25	470	10	12.5	117.5	16	10	5000	3500	AE471M025G125PTA <input type="checkbox"/>
	560	10	16	140	16	8	5800	4000	AE561M025G160PTA <input type="checkbox"/>
	680	10	16	170	16	8	5800	4000	AE681M025G160PTA <input type="checkbox"/>
35	330	10	12.5	115.5	16	11	4800	3300	AE331M035G125PTA <input type="checkbox"/>
	470	10	16	164.5	16	9	5500	3800	AE471M035G160PTA <input type="checkbox"/>
50	68	10	12.5	34	16	15	4000	2800	AE680M050G125PTA <input type="checkbox"/>
	100	10	12.5	50	16	15	4000	2800	AE101M050G125PTA <input type="checkbox"/>
	120	10	12.5	60	16	12	4600	3200	AE121M050G125PTA <input type="checkbox"/>
	150	10	12.5	75	16	12	4600	3200	AE151M050G125PTA <input type="checkbox"/>
	180	10	16	90	16	10	5200	3600	AE181M050G160PTA <input type="checkbox"/>
	220	10	16	110	16	10	5200	3600	AE221M050G160PTA <input type="checkbox"/>
63	47	10	12.5	29.6	16	15	4000	2800	AE470M063G125PTA <input type="checkbox"/>
	56	10	12.5	35.3	16	15	4000	2800	AE560M063G125PTA <input type="checkbox"/>
	68	10	12.5	42.8	16	15	4000	2800	AE680M063G125PTA <input type="checkbox"/>
	100	10	12.5	63.0	16	12	4600	3200	AE101M063G125PTA <input type="checkbox"/>
	120	10	12.5	75.6	16	12	4600	3200	AE121M063G125PTA <input type="checkbox"/>
	150	10	16	94.5	16	10	5200	3600	AE151M063G160PTA <input type="checkbox"/>
80	47	10	12.5	37.6	16	18	3600	2500	AE470M080G125PTA <input type="checkbox"/>
	56	10	12.5	44.8	16	18	3600	2500	AE560M080G125PTA <input type="checkbox"/>
	68	10	12.5	54.4	16	15	4000	2800	AE680M080G125PTA <input type="checkbox"/>
	100	10	16	80	16	12	4700	3300	AE101M080G160PTA <input type="checkbox"/>
100	22	10	12.5	22	16	25	3000	2100	AE220M100G125PTA <input type="checkbox"/>
	33	10	12.5	33	16	20	3400	2400	AE330M100G125PTA <input type="checkbox"/>
	47	10	16	47	16	15	4100	2900	AE470M100G160PTA <input type="checkbox"/>

☐: 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.

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	0.15	0.15	0.20	0.25





Frequency (Hz)	500 ≤ Freq. < 1k	1k ≤ Freq. < 2k	2k ≤ Freq. < 3k	3k ≤ Freq. < 5k
Coefficient K _f	0.30	0.40	0.45	0.55

Frequency (Hz)	5k ≤ Freq. < 10k	10k ≤ Freq. < 15k	15k ≤ Freq. < 20k	20k ≤ Freq. < 40k
Coefficient K _f	0.60	0.70	0.75	0.80

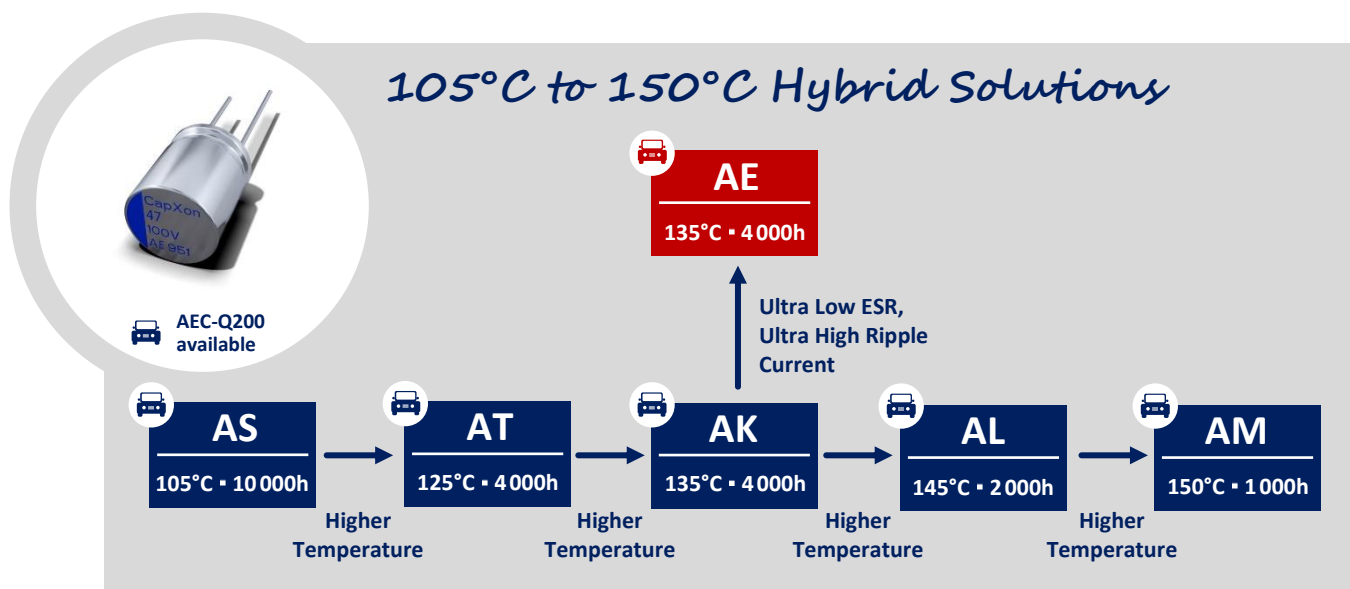
Frequency (Hz)	40k ≤ Freq. < 50k	50k ≤ Freq. < 100k	100k ≤ Freq. < 500k	500k ≤ Freq. < 1M
Coefficient K _f	0.85	0.90	1.00	1.00

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	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.

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