

AU SERIES ■ HIGH RIPPLE CURRENT TYPE

KEY FEATURES



- **HYBRID CONDUCTIVE POLYMER • SMD type**
- Endurance: 135°C ■ 4 000 hours
- Ultra-low ESR and highest ripple current
- Vibration Proof (VP) version (up to 30g) available
- 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

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

STANDARD RATINGS

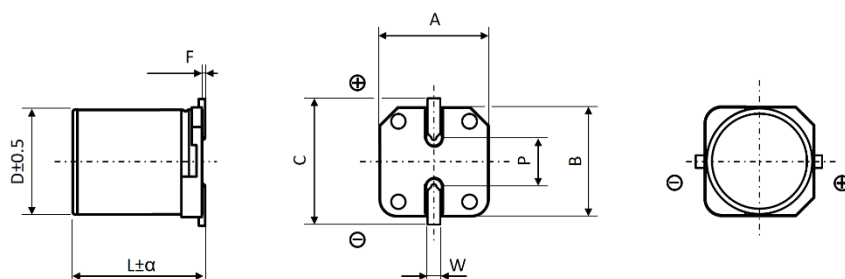
Part number shows blister tape on paper reel

V _R (V)	Standard	Vibration-proof	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	10.0	12.4	117.5	14	10	5000	3500	AU471M025G124PTR □□
	•	•	560	10.0	16.5	140	14	8	5800	4000	AU561M025G165PTR □□
	•	•	680	10.0	16.5	170	14	8	5800	4000	AU681M025G165PTR □□
35	•	•	330	10.0	12.4	115.5	12	11	4800	3300	AU331M035G124PTR □□
	•	•	470	10.0	16.5	164.5	12	9	5500	3800	AU471M035G165PTR □□
50	•	•	68	10.0	12.4	34	10	15	4000	2800	AU680M050G124PTR □□
	•	•	100	10.0	12.4	50	10	15	4000	2800	AU101M050G124PTR □□
	•	•	120	10.0	12.4	60	10	12	4600	3200	AU121M050G124PTR □□
	•	•	150	10.0	12.4	75	10	12	4600	3200	AU151M050G124PTR □□
	•	•	180	10.0	16.5	90	10	10	5200	3600	AU181M050G165PTR □□
	•	•	220	10.0	16.5	110	10	10	5200	3600	AU221M050G165PTR □□
63	•	•	47	10.0	12.4	29.6	8	15	4000	2800	AU470M063G124PTR □□
	•	•	56	10.0	12.4	35.3	8	15	4000	2800	AU560M063G124PTR □□
	•	•	68	10.0	12.4	42.8	8	15	4000	2800	AU680M063G124PTR □□
	•	•	100	10.0	12.4	63.0	8	12	4600	3200	AU101M063G124PTR □□
	•	•	120	10.0	12.4	75.6	8	12	4600	3200	AU121M063G124PTR □□
	•	•	150	10.0	16.5	94.5	8	10	5200	3600	AU151M063G165PTR □□
80	•	•	47	10.0	12.4	37.6	8	18	3600	2500	AU470M080G124PTR □□
	•	•	56	10.0	12.4	44.8	8	15	3600	2500	AU560M080G124PTR □□
	•	•	68	10.0	12.4	54.5	8	15	4000	2800	AU680M080G124PTR □□
	•	•	100	10.0	16.5	80	8	12	4700	3300	AU101M080G165PTR □□
100	•	•	22	10.0	12.4	22	8	25	3000	2100	AU220M100G124PTR □□
	•	•	33	10.0	12.4	33	8	20	3400	2400	AU330M100G124PTR □□
	•	•	47	10.0	16.5	47	8	15	4100	2900	AU470M100G165PTR □□

□□: Leave **blank** for Standard package
 □□: Enter **W** for Vibration proof version

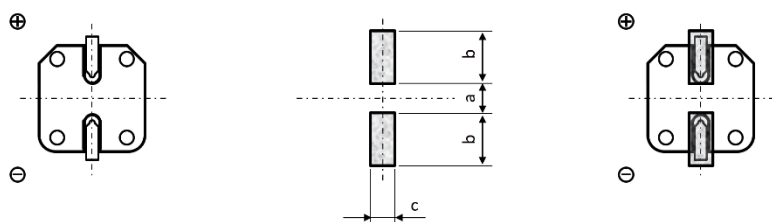
□□: Enter **X** for AEC-Q200
 □□: Enter **XW** for AEC-Q200 and Vibration proof version

DIMENSIONS STANDARD PACKAGE ▀ All dimensions in mm



ϕD	L	α	$A \pm 0.2$	$B \pm 0.2$	$C \pm 0.2$	F	$P \pm 0.2$	W
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



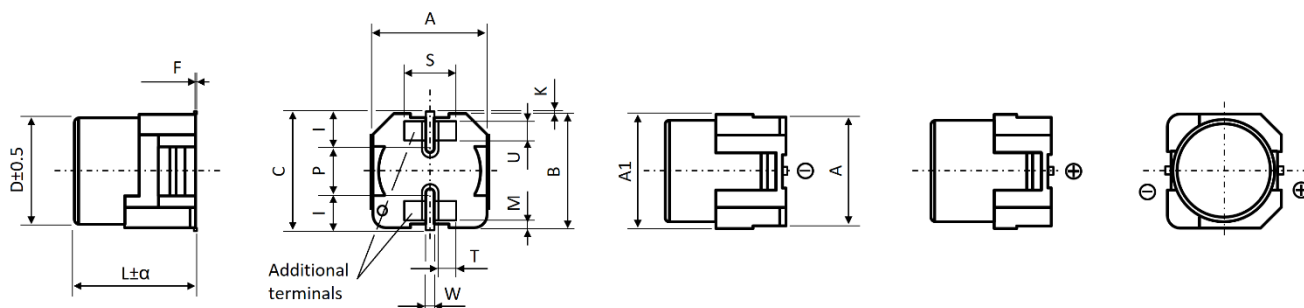
Bottom view

Recommended land patterns

Capacitor mounted on pads

ϕD	L	a	b	c
10.0	12.4	4.3	4.4	1.9
10.0	16.5	4.3	4.4	1.9

DIMENSIONS VP PACKAGE (VIBRATION-PROOF) Ø D10 • All dimensions in mm

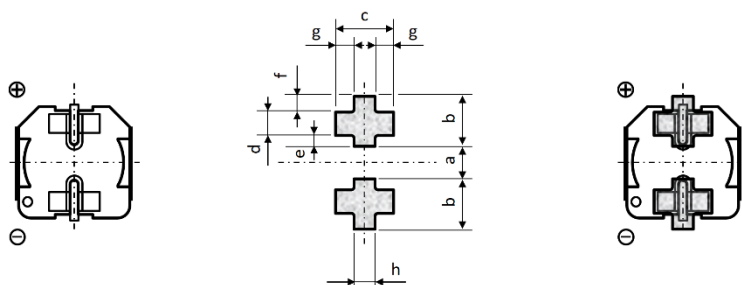


Note: Additional terminals electrical connected to anode or cathode terminal.

ϕD	L	α	$A \pm 0.2$	A1 (max.)	$B \pm 0.2$	C (max.)	F	$K \pm 0.2$
10.0	12.4	-0.3/+0.7	10.3	10.8	10.3	12.0	0 to 0.15	0.7
10.0	16.5	-0.3/+0.7	10.3	10.8	10.3	12.0	0 to 0.15	0.7

ϕD	L	$I \pm 0.1$	$M \pm 0.1$	$P \pm 0.2$	$S \pm 0.1$	$T \pm 0.1$	$U \pm 0.1$	$W \pm 0.1$
10.0	12.4	3.5	0.9	4.6	3.3	0.9	0.8	1.2
10.0	16.5	3.5	0.9	4.6	3.3	0.9	0.8	1.2

PAD LAYOUT VP PACKAGE (VIBRATION-PROOF) Ø D10 • All dimensions in mm



Bottom view






Recommended land patterns

Capacitor mounted on pads

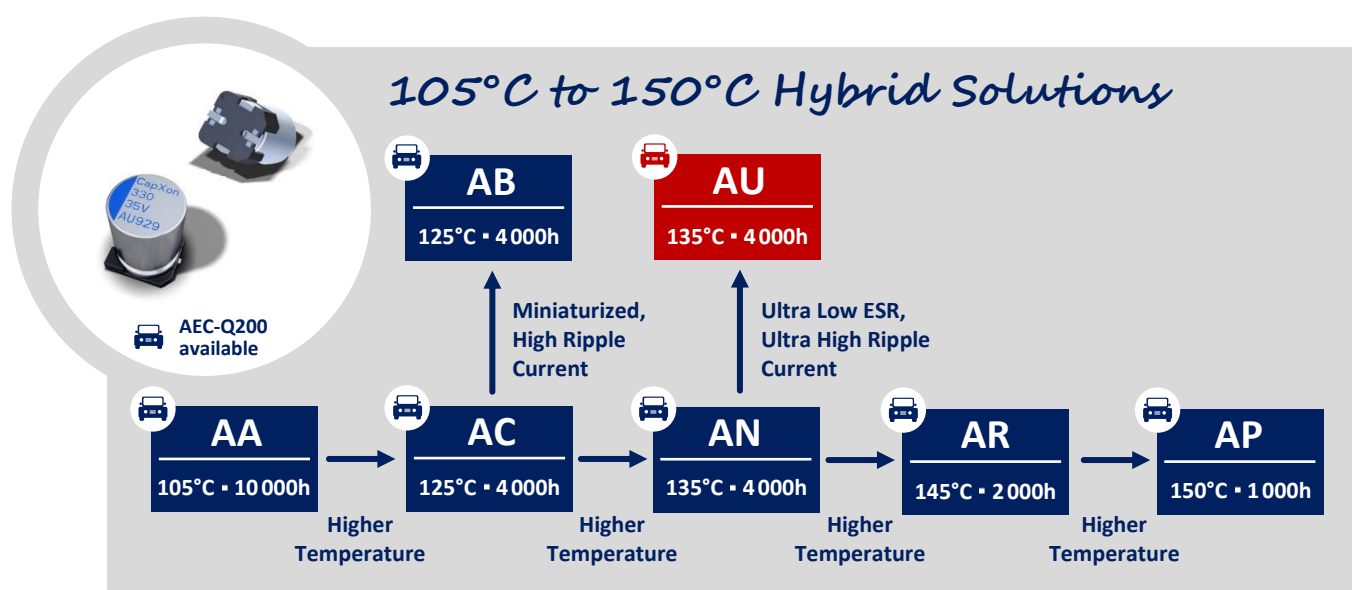
ϕD	L	a	b	c	d	e	f	g	h
10.0	12.4	3.9	4.4	4.7	1.3	1.2	1.9	1.1	2.5
10.0	16.5	3.9	4.4	4.7	1.3	1.2	1.9	1.1	2.5

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.

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