UHA Series (Anti-vibrating design)

- Compliant to the RoHS directive
- 105°C 3000H high temperature with anti-vibrating design
- Electric power tool 、vibration instrument

◆ SPECIFICATIONS

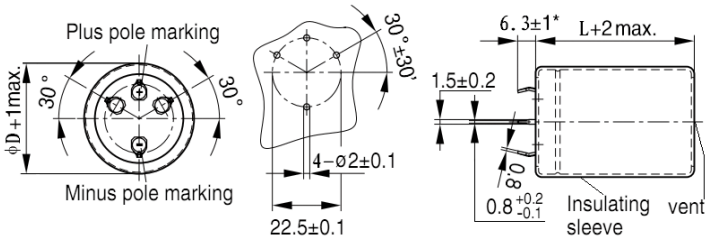
Item	Performance Characteristics							
Operating range	-25°C ~ +105°C							
Rated voltage range	250V ~ 450V							
Capacitance tolerance	±20% (20°C, 120Hz)							
Leakage current	I≤0.01CV(μA) or1.5mA (Whichever is smaller) (20°C, after 5 minutes) C=Nominal capacitance(μF), V=Rated voltage(V)							
Dissipation factor (20°C,120Hz)	U_R(V)	10	16	25	35	50	63 ~ 400	450
	tanδ	0.50	0.400	0.30	0.25	0.20	0.15	0.20
Stability at Low Temperature (Impedance ratio at120Hz)	UR(V)	10 ~ 16	25	35	50 ~ 63	80 ~ 100	160 ~ 250	315 ~ 450
	Z(-25°C)/Z(+20°C)	4	3	3	2		4	8
	Z(-40°C)/Z(+20°C)	15	10	8	6	5	-	
Load Life	After applying rated voltage with specified ripple current for 3000 hours at 105°C(the peak voltage shall not exceed the rated voltage), and then restored for 24 hours, capacitor shall meet the following requirement:							
	Capacitance change	Within ±20% of the initial value.						
	Dissipation factor	Not more than 200% of the initial specified value.						
	Leakage current	Not more than the initial specified value.						
Shelf Life	After storing for 1000 hours at 105°C,UR to be applied for 30 minutes and then restored for 24 hours, capacitor shall meet the following requirement:							
	Capacitance change	Within ±15% of the initial value.						
	Dissipation factor	Not more than150% of the initial specified value.						
	Leakage current	Not more than the initial specified value.						
Standard	JIS C 5101-4							

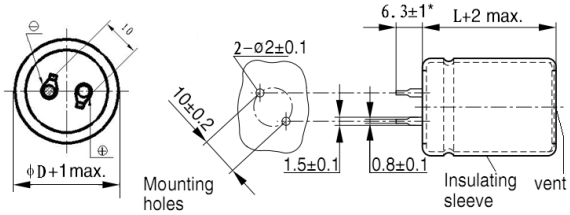
◆ Coefficient of rated ripple current

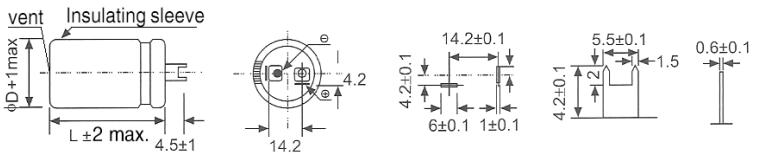
F (Hz) / U_R(V)	50(60)	120	1K	10K	100K
≤50	0.95	1.00	1.05	1.08	1.08
63-100	0.92	1.00	1.13	1.19	1.20
160-250	0.81	1.00	1.32	1.45	1.50
315-500	0.77	1.00	1.30	1.41	1.43

◆ Drawing

Unit:mm







◆ Shorter terminal is: 4.0±0.5mm

◆ STANDARD RATING

Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Ripple current 105°C, 120Hz (Arms)	Max ESR 20°C, 120Hz(mΩ)	ESR(typ.) 20°C, 120Hz(mΩ)	Part number
250 2E (300)	180	22*25	0.15	0.99	1110	780	UHA2E181KP025M
	220	22*30	0.15	1.17	910	640	UHA2E221KP030M
		25*25	0.15	1.17	910	640	UHA2E221KQ025M
	270	22*35	0.15	1.21	740	520	UHA2E271KP035M
	330	22*40	0.15	1.38	610	430	UHA2E331KP040M
		25*30	0.15	1.38	610	430	UHA2E331KQ030M
		30*25	0.15	1.38	610	430	UHA2E331KR025M
	390	22*45	0.15	1.58	510	360	UHA2E391KP045M
		25*35	0.15	1.58	510	360	UHA2E391KQ035M
	470	25*40	0.15	1.69	430	300	UHA2E471KQ040M
		30*30	0.15	1.69	430	300	UHA2E471KR030M
		35*25	0.15	1.69	430	300	UHA2E471KS025M
	560	25*45	0.15	1.96	360	250	UHA2E561KQ045M
		30*35	0.15	1.96	360	250	UHA2E561KR035M
		35*30	0.15	1.96	360	250	UHA2E561KS030M
	680	25*50	0.15	2.34	300	210	UHA2E681KQ050M
		30*40	0.15	2.34	300	210	UHA2E681KR040M
	820	30*45	0.15	2.47	245	170	UHA2E821KR045M
		35*35	0.15	2.47	245	170	UHA2E821KS035M
	1000	30*50	0.15	2.84	200	140	UHA2E102KR050M
		35*40	0.15	2.84	200	140	UHA2E102KS040M
	1200	35*45	0.15	3.20	170	120	UHA2E122KS045M
	1500	35*50	0.15	3.76	170	120	UHA2E152KS050M
315 2F (365)	100	22*25	0.15	0.74	2000	1600	UHA2F101KP025M
	120	22*25	0.15	0.83	2000	1600	UHA2F121KP025M
	150	22*30	0.15	0.89	1330	1100	UHA2F151KP030M
		25*25	0.15	0.89	1330	1100	UHA2F151KQ025M
	180	22*35	0.15	1.00	1110	890	UHA2F181KP035M
		25*30	0.15	1.00	1110	890	UHA2F181KQ030M
	220	22*40	0.15	1.21	910	730	UHA2F221KP040M
		25*35	0.15	1.21	910	730	UHA2F221KQ035M
	270	22*45	0.15	1.39	740	600	UHA2F271KP045M
		25*40	0.15	1.39	740	600	UHA2F271KQ040M
		30*30	0.15	1.39	740	600	UHA2F271KR030M
		35*25	0.15	1.39	740	600	UHA2F271KS025M
	330	25*45	0.15	1.50	610	490	UHA2F331KQ045M
		30*35	0.15	1.50	610	490	UHA2F331KR035M
	390	30*40	0.15	1.68	520	410	UHA2F391KR040M
		35*30	0.15	1.68	520	410	UHA2F391KS030M
	470	30*45	0.15	1.91	430	345	UHA2F471KR045M
		35*35	0.15	1.91	430	345	UHA2F471KS035M
	560	30*50	0.15	2.13	360	290	UHA2F561KR050M
		35*40	0.15	2.13	360	290	UHA2F561KS040M
	680	35*45	0.15	2.47	300	240	UHA2F681KS045M
350 2V (400)	82	22*30	0.15	0.63	2940	1620	UHA2V820KP030M
	100	25*25	0.15	0.74	1995	1100	UHA2V101KQ025M
	120	22*35	0.15	0.82	1660	920	UHA2V121KP035M
	150	22*40	0.15	0.89	1330	730	UHA2V151KP040M
	180	22*45	0.15	1.00	1110	610	UHA2V181KP045M
		25*35	0.15	1.00	1110	610	UHA2V181KQ035M
		30*30	0.15	1.00	1110	610	UHA2V181KR030M
	220	22*50	0.15	1.10	910	500	UHA2V221KP050M
		25*40	0.15	1.10	910	500	UHA2V221KQ040M
	270	25*50	0.15	1.31	740	410	UHA2V271KQ050M
		30*35	0.15	1.31	740	410	UHA2V271KR035M
		35*30	0.15	1.31	740	410	UHA2V271KS030M

◆ STANDARD RATING

Rated Voltage code (V.DC)	Capacitance (μF)	Case size ΦD×L(mm)	tanδ 20°C, 120Hz	Ripple current 105°C, 120Hz (Arms)	Max ESR 20°C, 120Hz(mΩ)	ESR(typ.) 20°C, 120Hz(mΩ)	Part number
350 2V (400)	330	30*45	0.15	1.52	610	340	UHA2V331KR045M
		35*35	0.15	1.52	610	340	UHA2V331KS035M
	390	30*50	0.15	1.69	510	285	UHA2V391KR050M
		35*40	0.15	1.69	510	285	UHA2V391KS040M
	470	35*45	0.15	1.94	425	240	UHA2V471KS045M
	560	35*50	0.15	2.18	355	200	UHA2V561KS050M
400 2G (450)	68	22*25	0.15	0.53	2930	1525	UHA2G680KP025M
	82	25*25	0.15	0.68	2430	1265	UHA2G820KQ025M
	100	22*30	0.15	0.84	2000	1035	UHA2G101KP030M
	120	22*35	0.15	0.92	1660	865	UHA2G121KP035M
		25*30	0.15	0.92	1660	865	UHA2G121KQ030M
		30*25	0.15	0.92	1660	865	UHA2G121KR025M
	150	22*40	0.15	1.00	1330	690	UHA2G151KP040M
		25*35	0.15	1.00	1330	690	UHA2G151KQ035M
	180	25*40	0.15	1.10	1110	575	UHA2G181KQ040M
		30*30	0.15	1.10	1110	575	UHA2G181KR030M
		35*25	0.15	1.10	1110	575	UHA2G181KS025M
	220	25*45	0.15	1.21	910	475	UHA2G221KQ045M
		30*35	0.15	1.21	910	475	UHA2G221KR035M
	270	25*50	0.15	1.37	740	385	UHA2G271KQ050M
		30*40	0.15	1.37	740	385	UHA2G271KR040M
		35*30	0.15	1.37	740	385	UHA2G271KS030M
	330	30*45	0.15	1.54	610	315	UHA2G331KR045M
		35*35	0.15	1.54	610	315	UHA2G331KS035M
	390	30*50	0.15	1.73	510	265	UHA2G391KR050M
		35*40	0.15	1.73	510	265	UHA2G391KS040M
	470	35*45	0.15	2.00	425	220	UHA2G471KS045M
	560	35*50	0.15	2.26	355	185	UHA2G561KS050M
	680	35*60	0.15	2.42	305	165	UHA2G681KS060M
450 2W (500)	56	22*30	0.20	0.61	4740	2370	UHA2W560KP030M
	68	22*30	0.20	0.69	3910	1960	UHA2W680KP030M
		25*25	0.20	0.69	3910	1960	UHA2W680KQ025M
	82	22*35	0.20	0.89	3240	1620	UHA2W820KP035M
		25*30	0.20	0.89	3240	1620	UHA2W820KQ030M
	100	22*40	0.20	1.10	2655	1330	UHA2W101KP040M
		25*30	0.20	1.10	2655	1330	UHA2W101KQ030M
		30*25	0.20	1.10	2655	1330	UHA2W101KR025M
	120	22*45	0.20	1.19	2215	1110	UHA2W121KP045M
		25*35	0.20	1.19	2215	1110	UHA2W121KQ035M
	150	25*40	0.20	1.38	1770	885	UHA2W151KQ040M
		30*30	0.20	1.38	1770	885	UHA2W151KR030M
		35*25	0.20	1.38	1770	885	UHA2W151KS025M
	180	25*45	0.20	1.68	1475	740	UHA2W181KQ045M
		30*35	0.20	1.68	1475	740	UHA2W181KR035M
	220	25*50	0.20	1.84	1210	610	UHA2W221KQ050M
		30*40	0.20	1.84	1210	610	UHA2W221KR040M
		35*30	0.20	1.84	1210	610	UHA2W221KS030M
	270	30*45	0.20	2.00	990	500	UHA2W271KR045M
		35*35	0.20	2.00	990	500	UHA2W271KS035M
	330	30*50	0.20	2.31	810	410	UHA2W331KR050M
		35*40	0.20	2.31	810	410	UHA2W331KS040M
	390	35*45	0.20	2.60	685	340	UHA2W391KS045M
	470	35*50	0.20	2.90	565	290	UHA2W471KS050M
	560	35*50	0.20	3.05	360	320	UHA2W561KS050M

●The endurance of capacitors is reduced with internal heating produced by ripple current at the rate of halving the lifetime with every 10°C rise.
●When long life performance is required in actual use, the rms ripple current has to be reduced.