

HA SERIES

◆ Standard Ratings

WV _{DC} (Surge Voltage) (V)	Cap (μF)	Size D×L (mm)	tanδ 20°C/120Hz	Ripple Current 105°C/120Hz (Arms)	Catalog Part Number
25 (32)	10000	35x60	0.35	3.2	HAU103M35060□VA
	15000	35x80	0.35	4.8	HAU153M35080□VA
	22000	35x80	0.35	5.8	HAU223M35080□VA
	33000	35x100	0.40	7.2	HAU333M35100□VA
	47000	51x80	0.40	9.3	HAU473M51080□VA
	68000	51x115	0.50	11.5	HAU683M51115□VA
	100000	64x95	0.60	13.0	HAU104M64095□VA
	150000	64x115	0.80	17.9	HAU154M64115□VA
	220000	76x115	1.00	21.3	HAU224M76115□VA
330000	89x130	1.00	23.4	HAU334M89130□VA	
35 (44)	6800	35x60	0.30	2.8	HAT682M35060□VA
	10000	35x80	0.30	4.1	HAT103M35080□VA
	15000	35x80	0.30	5.2	HAT153M35080□VA
	22000	35x100	0.35	6.3	HAT223M35100□VA
	33000	51x80	0.40	8.7	HAT333M51080□VA
	47000	51x95	0.45	11.2	HAT473M51095□VA
	68000	51x150	0.50	14.3	HAT683M51150□VA
	100000	64x115	0.60	17.2	HAT104M64115□VA
	150000	76x115	0.70	20.7	HAT154M76115□VA
220000	89x130	0.70	23.4	HAT224M89130□VA	
50 (63)	3300	35x60	0.20	2.5	HAR332M35060□VA
	4700	35x60	0.25	3.7	HAR472M35060□VA
	6800	35x80	0.25	3.9	HAR682M35080□VA
	10000	35x80	0.25	4.7	HAR103M35080□VA
	15000	35x100	0.30	5.7	HAR153M35100□VA
	22000	51x80	0.35	8.1	HAR223M51080□VA
	33000	51x115	0.40	11.1	HAR333M51115□VA
	47000	64x95	0.40	13.9	HAR473M64095□VA
	68000	64x115	0.45	16.6	HAR683M64115□VA
100000	76x115	0.50	19.5	HAR104M76115□VA	
150000	76x115	0.50	23.9	HAR154M76115□VA	
63 (79)	2200	35x60	0.15	2.5	HAQ222M35060□VA
	3300	35x60	0.20	2.7	HAQ332M35060□VA
	4700	35x80	0.20	3.8	HAQ472M35080□VA
	6800	35x80	0.20	4.4	HAQ682M35080□VA
	10000	35x100	0.25	5.3	HAQ103M35100□VA
	15000	51x80	0.25	6.8	HAQ153M51080□VA
	22000	51x95	0.30	9.0	HAQ223M51095□VA
	33000	64x95	0.30	12.0	HAQ333M64095□VA
	47000	64x115	0.35	14.5	HAQ473M64115□VA
68000	76x115	0.40	18.4	HAQ683M76115□VA	
100000	89x130	0.40	20.0	HAQ104M89130□VA	
80 (100)	2200	35x60	0.15	2.8	HAP222M35060□VA
	3300	35x80	0.15	3.6	HAP332M35080□VA
	4700	35x80	0.15	4.3	HAP472M35080□VA
	6800	35x100	0.20	4.9	HAP682M35100□VA
	10000	51x80	0.20	6.4	HAP103M51080□VA
	15000	51x95	0.25	7.4	HAP153M51095□VA
	22000	64x95	0.25	11.0	HAP223M64095□VA
	33000	76x95	0.30	13.9	HAP333M76095□VA
	47000	76x115	0.30	16.5	HAP473M76115□VA
68000	89x130	0.30	19.7	HAP683M89130□VA	
100 (125)	1000	35x60	0.15	1.6	HAO102M35060□VA
	1500	35x60	0.15	2.0	HAO152M35060□VA
	2200	35x80	0.15	3.0	HAO222M35080□VA
	3300	35x80	0.15	4.2	HAO332M35080□VA
	4700	35x100	0.15	5.0	HAO472M35100□VA
	6800	51x80	0.15	5.8	HAO682M51080□VA

WV _{DC} (Surge Voltage) (V)	Cap (μF)	Size D×L (mm)	tanδ 20°C/120Hz	Ripple Current 105°C/120Hz (Arms)	Catalog Part Number
100 (125)	10000	51x95	0.15	7.8	HAO103M51095□VA
	15000	64x95	0.20	10.4	HAO153M64095□VA
	22000	76x95	0.20	12.5	HAO223M76095□VA
	33000	76x130	0.25	15.2	HAO333M76130□VA
	47000	89x130	0.25	19.3	HAO473M89130□VA
	160 (200)	470	35x60	0.15	1.2
680		35x60	0.15	1.3	HAN681M35060□VA
1000		35x80	0.15	1.9	HAN102M35080□VA
1500		35x80	0.15	2.4	HAN152M35080□VA
2200		35x100	0.15	3.2	HAN222M35100□VA
3300		51x80	0.15	4.2	HAN332M51080□VA
4700		51x95	0.15	5.5	HAN472M51095□VA
6800		64x95	0.15	7.1	HAN682M64095□VA
10000		76x95	0.15	9.1	HAN103M76095□VA
15000		76x130	0.15	11.8	HAN153M76130□VA
22000	89x130	0.15	15.2	HAN223M89130□VA	
200 (250)	330	35x60	0.15	0.9	HAL331M35060□VA
	470	35x60	0.15	1.2	HAL471M35060□VA
	680	35x80	0.15	1.4	HAL681M35080□VA
	1000	35x100	0.15	2.0	HAL102M35100□VA
	1500	35x80	0.15	2.5	HAL152M35080□VA
	2200	51x95	0.15	3.2	HAL222M51095□VA
	3300	51x95	0.15	4.3	HAL332M51095□VA
	4700	64x95	0.15	5.2	HAL472M64095□VA
	6800	64x115	0.15	7.3	HAL682M64115□VA
	10000	76x155	0.15	9.3	HAL103M76155□VA
15000	89x157	0.15	12.5	HAL153M89157□VA	
250 (300)	330	35x60	0.15	0.9	HAJ331M35060□VA
	470	35x60	0.15	1.1	HAJ471M35060□VA
	680	35x80	0.15	1.5	HAJ681M35080□VA
	1000	35x100	0.15	2.1	HAJ102M35100□VA
	1500	51x80	0.15	2.6	HAJ152M51080□VA
	2200	51x95	0.15	3.4	HAJ222M51095□VA
	3300	64x95	0.15	4.6	HAJ332M64095□VA
	4700	64x115	0.15	6.0	HAJ472M64115□VA
	6800	76x115	0.15	7.9	HAJ682M76115□VA
10000	76x155	0.15	10.2	HAJ103M76155□VA	
15000	89x157	0.15	13.5	HAJ153M89157□VA	
350 (400)	470	35x60	0.15	1.4	HAH471M35060□VA
	680	35x80	0.15	1.9	HAH681M35080□VA
	1000	35x120	0.15	2.8	HAH103M35120□VA
	1500	51x80	0.15	3.5	HAH152M51080□VA
	2200	51x115	0.15	4.8	HAH222M51115□VA
	3300	64x95	0.15	6.1	HAH332M64095□VA
	4700	76x115	0.15	8.3	HAH472M76115□VA
	6800	76x155	0.15	11.0	HAH682M76155□VA
	10000	89x157	0.15	14.6	HAH103M89157□VA
15000	89x195	0.15	19.1	HAH153M89195□VA	
400 (450)	1000	51x80	0.15	2.7	HAG102M51080□VA
	1200	51x95	0.15	3.2	HAG122M51095□VA
	1500	51x115	0.15	3.9	HAG152M51115□VA
	1800	51x130	0.15	4.4	HAG182M51130□VA
	2200	64x95	0.15	4.9	HAG222M64095□VA
	2700	64x115	0.15	5.7	HAG272M64115□VA
	3300	64x130	0.15	6.6	HAG332M64130□VA
	3900	76x115	0.15	7.5	HAG392M76115□VA
4700	76x130	0.15	8.7	HAG472M76130□VA	
5600	76x155	0.15	10.3	HAG562M76155□VA	

*□Enter the appropriate terminal code

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400 (450)	6800	89×157	0.15	12.1	HAG682M89157□VA
	8200	89×157	0.15	13.2	HAG822M89157□VA
	10000	89×195	0.15	15.6	HAG103M89195□VA
	12000	89×195	0.15	17.1	HAG123M89195□VA
	15000	89×235	0.15	20.8	HAG153M89235□VA
450 (500)	220	35×60	0.15	1.1	HAE221M35060□VA
	330	35×100	0.15	1.5	HAE331M35100□VA
	470	51×80	0.15	2.1	HAE471M51080□VA
	680	51×95	0.15	2.7	HAE681M51095□VA
	1000	51×105	0.15	4.2	HAE102M51105□VA
	1500	51×130	0.15	5.7	HAE152M51130□VA
	2200	64×115	0.15	7.3	HAE222M64115□VA
	2700	64×130	0.15	8.3	HAE272M64130□VA
	3300	76×130	0.15	10.1	HAE332M76130□VA
	4700	76×155	0.15	12.6	HAE472M76155□VA
	5600	89×157	0.15	15.8	HAE562M89157□VA
	6800	89×157	0.15	18.0	HAE682M89157□VA

WV _{DC} (Surge Voltage) (V)	Cap (μF)	Size D×L (mm)	tanδ 20°C/120Hz	Ripple Current 105°C/120Hz (Arms)	Catalog Part Number
450 (500)	8200	89×195	0.15	19.8	HAE822M89195□VA
	10000	89×195	0.15	22.0	HAE103M89195□VA
	12000	89×235	0.15	26.0	HAE123M89235□VA
	15000	89×250	0.15	29.0	HAE153M89250□VA
	500 (550)	330	51×80	0.15	1.5
470		51×80	0.15	1.8	HAC471M51080□VA
680		51×105	0.15	2.5	HAC681M51105□VA
1000		51×115	0.15	3.1	HAC102M51115□VA
1500		64×115	0.15	4.4	HAC152M64115□VA
2200		64×130	0.15	5.6	HAC222M64130□VA
3300		76×155	0.15	8.1	HAC332M76155□VA
4700		89×157	0.15	10.6	HAC472M89157□VA
5600		89×157	0.15	11.6	HAC562M89157□VA
6800		89×170	0.15	13.3	HAC682M89170□VA
8200		89×235	0.15	16.9	HAC822M89235□VA
10000		89×250	0.15	18.1	HAC103M89250□VA

*□Enter the appropriate terminal code

*Please ask for advice for other sizes.

*Aluminum electrolytic capacitor will emit heat when ripple current is applied, the performance will deteriorate when temp. rises. the useful life will be half of original life when temp rises every 5°C. Please reduce the ripple current when using capacitor.