

Standard

## HP3 Series Useful of 4,000 hours at 85°C

• Conform RoHS

### Features

• The HP3 series is the standard products of 85°C .

HP3

→  
105°C

HU3  
P.124



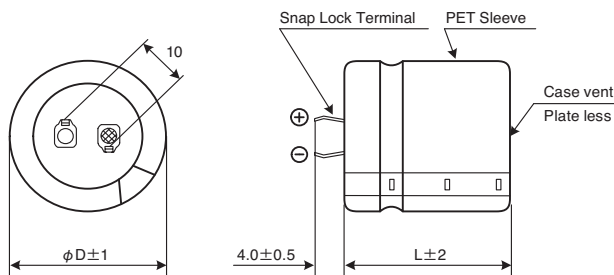
### Product Specifications

Items	Specifications
Temperature range	-40°C ~ +85°C
Rated voltage	16 ~ 450V.DC
Capacitance tolerance	±20% (20°C, 120Hz)
Leakage current	0.02CV (µA) or 3mA, whichever is smaller or less (20°C, after 5 minutes) [C = nominal capacitance (µF), V = rated voltage (V)]
Dissipation factor	Less than the value specified in the standard products table. (20°C, 120Hz)
Permissible ripple current	As specified in the standard products table. (85°C, 120Hz)
Endurance	After the rated voltage with specified ripple current is applied at 85°C for 2,000 hours : 16 ~ 350V.DC / Capacitance change : Within ±15% of the initial value measured Dissipation factor : 175% or less than the initial value specified Leakage current : Less than or equal to the initial value specified 400 ~ 450V.DC/ Capacitance change : Within ±20% of the initial value measured Dissipation factor : 200% or less than the initial value specified Leakage current : Less than or equal to the initial value specified
Shelf life	The following specification shall be meet when the capacitor are restored to 20°C after storage of 500 hours at 85°C with no voltage applied. Before the measurement, the capacitor shall be preconditioned by applying the voltage treatment according to Item 4.1 of JIS C 5101-4. Capacitance change : Within ±15% of the initial value measured Dissipation factor : 175% or less than the initial value specified Leakage current : Less than or equal to the initial value specified
Others	JIS C 5101-4

### Dimensions

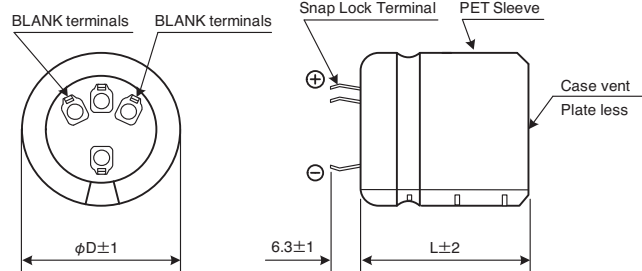
2-claw short terminal (Terminal code : C)

(Unit : mm)



4-claw terminal (Terminal code : S)

(Unit : mm)



### Ripple current correction coefficient

Temperature (°C)		60	70	85		
Correction coefficient		1.4	1.2	1.0		
Frequency (Hz)		50/60	120	300	1K	≥10K
Correction coefficient	16~100V.DC	0.7	1.0	1.1	1.2	1.2
	160~450V.DC	0.7	1.0	1.1	1.3	1.4

Terminal permissible current is limited to 10Arms. (Even if calculated the permissible ripple current with the correction coefficient exceeds 10Arms)  
Please consult us when the ripple voltage exceeds 70Vp-p.

### Product code

(Example) HP3 Series 16V 10,000µF ±20%

**HP3 1C 103 M C X S3 WP EC**

- HP3: Type of series
- 1C: Rated voltage code
- 103: Capacitance code
- M: Capacitance tolerance code
- C: Case dia code
- X: Case height code
- S3: Plate code
- WP: Environmental code
- EC: Environmental code

Refer to page 118-119 for other terminal shape available on request.

# SNAP MOUNT TYPE ALUMINUM ELECTROLYTIC CAPACITORS

## HP3 Series

Standard Products Table

Rated Voltage (V. DC)	Capacitance (μF)	Case size φD×L (mm)	tanδ 20°C, 120Hz	Ripple current (Arms) 85°C, 120Hz	ESR(typ.) (mΩ) 20°C, 100Hz	Product name	
16	6,800	22×25	0.50	1.78	51	HP31C682MCXS2WPEC	
		22×30	0.50	1.94	41	HP31C103MCXS3WPEC	
	10,000	25×25	0.50	1.92	41	HP31C103MCYS2WPEC	
		22×40	0.50	2.65	28	HP31C153MCXS5WPEC	
	15,000	25×30	0.50	2.52	28	HP31C153MCYS3WPEC	
		30×25	0.50	2.52	28	HP31C153MCZS2WPEC	
		25×45	0.50	3.52	22	HP31C223MCYS6WPEC	
	22,000	30×30	0.50	3.23	22	HP31C223MCZS3WPEC	
		35×25	0.50	3.23	22	HP31C223MCAS2WPEC	
		30×45	0.50	4.28	17	HP31C333MCZS6WPEC	
35×35		0.50	4.12	17	HP31C333MCAS4WPEC		
25	4,700	22×25	0.40	1.48	88	HP31E472MCXS2WPEC	
	6,800	22×30	0.40	1.89	70	HP31E682MCXS3WPEC	
		25×25	0.40	1.87	70	HP31E682MCYS2WPEC	
	10,000	22×35	0.40	2.06	48	HP31E103MCXS4WPEC	
		25×30	0.40	2.06	48	HP31E103MCYS3WPEC	
		30×25	0.40	2.06	48	HP31E103MCZS2WPEC	
		22×45	0.40	2.78	32	HP31E153MCXS6WPEC	
	15,000	25×35	0.40	2.67	32	HP31E153MCYS4WPEC	
		30×30	0.40	2.67	32	HP31E153MCZS3WPEC	
		35×25	0.40	2.67	32	HP31E153MCAS2WPEC	
	22,000	25×45	0.40	3.52	22	HP31E223MCYS6WPEC	
		30×35	0.40	3.41	22	HP31E223MCZS4WPEC	
		35×30	0.40	3.41	22	HP31E223MCAS3WPEC	
		30×50	0.40	4.45	17	HP31E333MCZS7WPEC	
	33,000	35×40	0.40	4.31	17	HP31E333MCAS5WPEC	
	35	3,300	22×25	0.35	1.38	165	HP31V332MCXS2WPEC
4,700		22×30	0.35	1.57	115	HP31V472MCXS3WPEC	
		25×25	0.35	1.56	115	HP31V472MCYS2WPEC	
6,800		22×35	0.35	2.01	80	HP31V682MCXS4WPEC	
		25×30	0.35	2.01	80	HP31V682MCYS3WPEC	
		30×25	0.35	2.01	80	HP31V682MCZS2WPEC	
10,000		22×45	0.35	2.27	55	HP31V103MCXS6WPEC	
		25×35	0.35	2.18	55	HP31V103MCYS4WPEC	
		30×30	0.35	2.18	55	HP31V103MCZS3WPEC	
		35×25	0.35	2.18	55	HP31V103MCAS2WPEC	
		25×50	0.35	3.03	35	HP31V153MCYS7WPEC	
15,000		30×35	0.35	2.82	35	HP31V153MCZS4WPEC	
		35×30	0.35	2.82	35	HP31V153MCAS3WPEC	
		30×45	0.35	3.73	25	HP31V223MCZS6WPEC	
22,000		35×40	0.35	3.76	25	HP31V223MCAS5WPEC	
33,000		35×50	0.40	4.67	20	HP31V333MCAS7WPEC	
50		2,200	22×25	0.30	1.13	108	HP31H222MCXS2WPEC
		3,300	22×30	0.30	1.47	72	HP31H332MCXS3WPEC
	25×25		0.30	1.46	72	HP31H332MCYS2WPEC	
	4,700	22×35	0.30	1.67	50	HP31H472MCXS4WPEC	
		25×30	0.30	1.67	50	HP31H472MCYS3WPEC	
		30×25	0.30	1.67	50	HP31H472MCZS2WPEC	
	6,800	22×50	0.30	2.31	35	HP31H682MCXS7WPEC	
		25×40	0.30	2.21	35	HP31H682MCYS5WPEC	
		30×30	0.30	2.13	35	HP31H682MCZS3WPEC	
		35×25	0.30	2.13	35	HP31H682MCAS2WPEC	
		25×50	0.35	2.48	32	HP31H103MCYS7WPEC	
	10,000	30×35	0.35	2.30	32	HP31H103MCZS4WPEC	
		35×30	0.35	2.30	32	HP31H103MCAS3WPEC	
		30×50	0.35	3.21	25	HP31H153MCZS7WPEC	
	15,000	35×40	0.35	3.10	25	HP31H153MCAS5WPEC	

Rated Voltage (V. DC)	Capacitance (μF)	Case size φD×L (mm)	tanδ 20°C, 120Hz	Ripple current (Arms) 85°C, 120Hz	ESR(typ.) (mΩ) 20°C, 100Hz	Product name	
63	1,500	22×25	0.25	1.08	159	HP31J152MCXS2WPEC	
	2,200	22×30	0.25	1.20	108	HP31J222MCXS3WPEC	
		25×25	0.25	1.19	108	HP31J222MCYS2WPEC	
	3,300	22×35	0.25	1.56	80	HP31J332MCXS4WPEC	
		25×30	0.25	1.56	80	HP31J332MCYS3WPEC	
		30×25	0.25	1.56	80	HP31J332MCZS2WPEC	
	4,700	22×45	0.25	1.84	60	HP31J472MCXS6WPEC	
		25×35	0.25	1.77	60	HP31J472MCYS4WPEC	
		30×30	0.25	1.77	60	HP31J472MCZS3WPEC	
		35×25	0.25	1.77	60	HP31J472MCAS2WPEC	
25×50		0.25	2.42	40	HP31J682MCYS7WPEC		
6,800	30×35	0.25	2.25	40	HP31J682MCZS4WPEC		
	35×30	0.25	2.25	40	HP31J682MCAS3WPEC		
10,000	30×45	0.35	2.52	35	HP31J103MCZS6WPEC		
	35×40	0.35	2.53	35	HP31J103MCAS5WPEC		
15,000	35×50	0.35	3.36	30	HP31J153MCAS7WPEC		
80	1,000	22×25	0.20	0.88	230	HP31K102MCXS2WPEC	
	1,500	22×30	0.20	1.15	155	HP31K152MCXS3WPEC	
		25×25	0.20	1.13	155	HP31K152MCYS2WPEC	
	2,200	22×40	0.20	1.34	105	HP31K222MCXS5WPEC	
		25×30	0.20	1.28	105	HP31K222MCYS3WPEC	
		30×25	0.20	1.28	105	HP31K222MCZS2WPEC	
	3,300	22×50	0.25	1.80	70	HP31K332MCXS7WPEC	
		25×40	0.25	1.72	70	HP31K332MCYS5WPEC	
		30×30	0.25	1.65	70	HP31K332MCZS3WPEC	
		35×25	0.25	1.65	70	HP31K332MCAS2WPEC	
		25×50	0.25	2.01	50	HP31K472MCYS7WPEC	
	4,700	30×40	0.25	1.96	50	HP31K472MCZS5WPEC	
		35×30	0.25	1.87	50	HP31K472MCAS3WPEC	
	6,800	30×50	0.25	2.56	35	HP31K682MCZS7WPEC	
		35×40	0.25	2.47	35	HP31K682MCAS5WPEC	
	100	1,000	22×30	0.20	0.94	180	HP32A102MCXS3WPEC
		1,500	25×25	0.20	0.93	180	HP32A102MCYS2WPEC
			22×35	0.20	1.22	120	HP32A152MCXS4WPEC
2,200		25×30	0.20	1.22	120	HP32A152MCYS3WPEC	
		30×25	0.20	1.22	120	HP32A152MCZS2WPEC	
		22×50	0.20	1.47	82	HP32A222MCXS7WPEC	
3,300		25×40	0.20	1.41	82	HP32A222MCYS5WPEC	
		30×30	0.20	1.35	82	HP32A222MCZS3WPEC	
		35×25	0.20	1.35	82	HP32A222MCAS2WPEC	
		25×50	0.20	1.88	60	HP32A332MCYS7WPEC	
		30×40	0.20	1.83	60	HP32A332MCZS5WPEC	
4,700		35×30	0.20	1.75	60	HP32A332MCAS3WPEC	
		30×50	0.25	2.12	45	HP32A472MCZS7WPEC	
		35×40	0.25	2.05	45	HP32A472MCAS5WPEC	
6,800		35×50	0.25	2.68	35	HP32A682MCAS7WPEC	
160		390	22×25	0.15	1.50	365	HP32C391MCXS2WPEC
		470	22×30	0.15	1.76	305	HP32C471MCXS3WPEC
			25×25	0.15	1.74	305	HP32C471MCYS2WPEC
	560	22×35	0.15	2.03	255	HP32C561MCXS4WPEC	
		25×30	0.15	2.02	255	HP32C561MCYS3WPEC	
	680	22×40	0.15	2.36	210	HP32C681MCXS5WPEC	
		25×30	0.15	2.24	210	HP32C681MCYS3WPEC	
	820	30×25	0.15	2.24	210	HP32C681MCZS2WPEC	
		22×45	0.15	2.72	175	HP32C821MCXS6WPEC	
		25×35	0.15	2.61	175	HP32C821MCYS4WPEC	
	1,000	30×30	0.15	2.61	175	HP32C821MCZS3WPEC	
		22×50	0.15	3.13	145	HP32C102MCXS7WPEC	
		25×40	0.15	3.00	145	HP32C102MCYS5WPEC	
		30×30	0.15	2.88	145	HP32C102MCZS3WPEC	
		35×25	0.15	2.88	145	HP32C102MCAS2WPEC	
	1,200	25×45	0.15	3.44	120	HP32C122MCYS6WPEC	
		30×35	0.15	3.34	120	HP32C122MCZS4WPEC	
	1,500	35×30	0.15	3.34	120	HP32C122MCAS3WPEC	
		30×40	0.15	3.91	95	HP32C152MCZS5WPEC	
	1,800	35×35	0.15	3.96	95	HP32C152MCAS4WPEC	
30×45		0.15	4.47	80	HP32C182MCZS6WPEC		
		35×35	0.15	4.34	80	HP32C182MCAS4WPEC	

ALUMINUM ELECTROLYTIC CAPACITORS

# SNAP MOUNT TYPE ALUMINUM ELECTROLYTIC CAPACITORS

Standard Products Table

Rated Voltage (V. DC)	Capacitance (μF)	Case size φ D × L (mm)	tanδ 20°C, 120Hz	Ripple current (Arms) 85°C, 120Hz	ESR(typ.) (mΩ) 20°C, 100Hz	Product name
180	330	22 × 25	0.15	1.38	375	HP32P331MCXS2WPEC
		22 × 30	0.15	1.60	320	HP32P391MCXS3WPEC
	390	25 × 25	0.15	1.58	320	HP32P391MCYS2WPEC
		22 × 30	0.15	1.76	265	HP32P471MCXS3WPEC
	470	25 × 25	0.15	1.74	265	HP32P471MCYS2WPEC
		22 × 35	0.15	2.03	225	HP32P561MCXS4WPEC
	560	25 × 30	0.15	2.03	225	HP32P561MCYS3WPEC
		30 × 25	0.15	2.03	225	HP32P561MCZS2WPEC
	680	22 × 40	0.15	2.36	185	HP32P681MCXS5WPEC
		25 × 35	0.15	2.35	185	HP32P681MCYS4WPEC
		30 × 25	0.15	2.24	185	HP32P681MCZS2WPEC
	820	22 × 45	0.15	2.72	155	HP32P821MCXS6WPEC
		25 × 35	0.15	2.59	155	HP32P821MCYS4WPEC
		30 × 30	0.15	2.61	155	HP32P821MCZS3WPEC
		35 × 25	0.15	2.61	155	HP32P821MCAS2WPEC
	1,000	25 × 45	0.15	3.14	125	HP32P102MCYS6WPEC
		30 × 35	0.15	3.04	125	HP32P102MCZS4WPEC
		35 × 25	0.15	2.88	125	HP32P102MCAS2WPEC
	1,200	25 × 50	0.15	3.59	105	HP32P122MCYS7WPEC
		30 × 40	0.15	3.49	105	HP32P122MCZS5WPEC
35 × 30		0.15	3.34	105	HP32P122MCAS3WPEC	
1,500	30 × 45	0.15	4.08	85	HP32P152MCZS6WPEC	
	35 × 35	0.15	3.96	85	HP32P152MCAS4WPEC	
1,800	35 × 40	0.15	4.50	70	HP32P182MCAS5WPEC	
200	330	22 × 25	0.15	1.53	325	HP32D331MCXS2WPEC
		22 × 30	0.15	1.92	275	HP32D391MCXS3WPEC
	390	22 × 30	0.15	1.94	230	HP32D471MCXS3WPEC
		25 × 25	0.15	1.92	230	HP32D471MCYS2WPEC
	470	22 × 35	0.15	2.25	190	HP32D561MCXS4WPEC
		25 × 30	0.15	2.23	190	HP32D561MCYS3WPEC
	560	22 × 40	0.15	2.61	160	HP32D681MCXS5WPEC
		25 × 35	0.15	2.86	160	HP32D681MCYS4WPEC
	680	30 × 25	0.15	2.45	160	HP32D681MCZS2WPEC
		25 × 40	0.15	3.26	130	HP32D821MCYS5WPEC
		30 × 30	0.15	3.13	130	HP32D821MCZS3WPEC
	820	35 × 25	0.15	3.13	130	HP32D821MCAS2WPEC
		25 × 45	0.15	3.46	110	HP32D102MCYS6WPEC
		30 × 35	0.15	3.64	110	HP32D102MCZS4WPEC
	1,000	35 × 30	0.15	3.66	110	HP32D102MCAS3WPEC
		30 × 40	0.15	4.19	90	HP32D122MCZS5WPEC
		35 × 30	0.15	3.67	90	HP32D122MCAS3WPEC
	1,500	35 × 35	0.15	4.31	75	HP32D152MCAS4WPEC
	1,800	35 × 45	0.15	5.15	70	HP32D182MCAS6WPEC

Rated Voltage (V. DC)	Capacitance (μF)	Case size φ D × L (mm)	tanδ 20°C, 120Hz	Ripple current (Arms) 85°C, 120Hz	ESR(typ.) (mΩ) 20°C, 100Hz	Product name
250	270	22 × 25	0.15	1.38	395	HP32E271MCXS2WPEC
		22 × 30	0.15	1.63	325	HP32E331MCXS3WPEC
	330	25 × 25	0.15	1.60	325	HP32E331MCYS2WPEC
		22 × 35	0.15	2.04	275	HP32E391MCXS4WPEC
	390	25 × 30	0.15	2.04	275	HP32E391MCYS3WPEC
		22 × 40	0.15	2.35	230	HP32E471MCXS5WPEC
	470	25 × 30	0.15	2.04	230	HP32E471MCYS3WPEC
		30 × 25	0.15	2.24	230	HP32E471MCZS2WPEC
	560	22 × 45	0.15	2.48	190	HP32E561MCXS6WPEC
		25 × 35	0.15	2.35	190	HP32E561MCYS4WPEC
		30 × 30	0.15	2.59	190	HP32E561MCZS3WPEC
	680	25 × 40	0.15	2.73	160	HP32E681MCYS5WPEC
		30 × 30	0.15	2.60	160	HP32E681MCZS3WPEC
		35 × 25	0.15	2.61	160	HP32E681MCAS2WPEC
	820	25 × 45	0.15	3.13	130	HP32E821MCYS6WPEC
		30 × 35	0.15	3.01	130	HP32E821MCZS4WPEC
		35 × 30	0.15	3.31	130	HP32E821MCAS3WPEC
	1,000	30 × 40	0.15	3.49	110	HP32E102MCZS5WPEC
		35 × 35	0.15	3.88	110	HP32E102MCAS4WPEC
		30 × 45	0.15	3.99	90	HP32E122MCZS6WPEC
1,200	35 × 40	0.15	4.40	90	HP32E122MCAS5WPEC	
	35 × 45	0.15	4.70	75	HP32E152MCAS6WPEC	
350	120	22 × 25	0.15	0.84	885	HP32V121MCXS2WPEC
		22 × 30	0.15	0.99	710	HP32V151MCXS3WPEC
	150	22 × 30	0.15	1.09	590	HP32V181MCXS3WPEC
		25 × 25	0.15	1.08	590	HP32V181MCYS2WPEC
	180	22 × 35	0.15	1.28	485	HP32V221MCXS4WPEC
		25 × 30	0.15	1.27	485	HP32V221MCYS3WPEC
		22 × 45	0.15	1.57	395	HP32V271MCXS6WPEC
	220	25 × 35	0.15	1.49	395	HP32V271MCYS4WPEC
		30 × 25	0.15	1.41	395	HP32V271MCZS2WPEC
		25 × 40	0.15	1.79	325	HP32V331MCYS5WPEC
	270	30 × 30	0.15	1.65	325	HP32V331MCZS3WPEC
		35 × 25	0.15	1.65	325	HP32V331MCAS2WPEC
		25 × 45	0.15	1.96	275	HP32V391MCYS6WPEC
	330	30 × 35	0.15	1.89	275	HP32V391MCZS4WPEC
		35 × 30	0.15	1.90	275	HP32V391MCAS3WPEC
		30 × 35	0.15	2.07	230	HP32V471MCZS4WPEC
	390	35 × 30	0.15	2.09	230	HP32V471MCAS3WPEC
		30 × 45	0.15	2.48	190	HP32V561MCZS6WPEC
		35 × 35	0.15	2.39	190	HP32V561MCAS4WPEC
	470	35 × 40	0.15	2.76	165	HP32V681MCAS5WPEC
35 × 40		0.15	2.76	165	HP32V681MCAS5WPEC	

ALUMINUM ELECTROLYTIC CAPACITORS

### Standard Products Table

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180	22 × 30	22 × 30	0.20	1.31	600	HP32G181MCXS3WPEC
		25 × 25	0.20	1.29	600	HP32G181MCYS2WPEC
220	22 × 35	22 × 35	0.20	1.54	490	HP32G221MCXS4WPEC
		25 × 30	0.20	1.52	490	HP32G221MCYS3WPEC
270	22 × 40	22 × 40	0.20	1.79	400	HP32G271MCXS5WPEC
		25 × 35	0.20	1.78	400	HP32G271MCYS4WPEC
330	30 × 25	30 × 25	0.20	1.69	400	HP32G271MCZS2WPEC
		22 × 50	0.20	2.17	330	HP32G331MCXS7WPEC
		25 × 40	0.20	2.07	330	HP32G331MCYS5WPEC
390	30 × 30	30 × 30	0.20	1.98	330	HP32G331MCZS3WPEC
		25 × 45	0.20	2.36	280	HP32G391MCYS6WPEC
470	30 × 35	30 × 35	0.20	2.27	280	HP32G391MCAS4WPEC
		35 × 25	0.20	2.16	280	HP32G391MCAS2WPEC
560	25 × 50	25 × 50	0.20	2.70	230	HP32G471MCYS7WPEC
		30 × 40	0.20	2.61	230	HP32G471MCZS5WPEC
680	35 × 30	35 × 30	0.20	2.50	230	HP32G471MCAS3WPEC
		30 × 45	0.20	2.98	200	HP32G561MCZS6WPEC
820	35 × 35	35 × 35	0.20	2.87	200	HP32G561MCAS4WPEC
		30 × 50	0.20	3.41	160	HP32G681MCZS7WPEC
1,000	35 × 40	35 × 40	0.20	3.31	160	HP32G681MCAS5WPEC
		30 × 60	0.20	3.45	140	HP32G821MCZS9WPEC
1,200	35 × 45	35 × 45	0.20	3.79	140	HP32G821MCAS6WPEC
		35 × 50	0.20	4.35	110	HP32G102MCAS7WPEC
1,500	35 × 75	35 × 75	0.20	4.42	100	HP32G122MSAS12WPEC
		40 × 56	0.20	4.28	100	HP32G122MSBS8WPEC
1,800	35 × 100	35 × 100	0.20	5.57	80	HP32G152MSAS17WPEC
		40 × 76	0.20	5.13	80	HP32G152MSBS12WPEC
		40 × 101	0.20	6.32	70	HP32G182MSBS17WPEC
420	120	22 × 25	0.20	1.00	920	HP3420V121MCXS2WPEC
150	22 × 30	22 × 30	0.20	1.20	740	HP3420V151MCXS3WPEC
		25 × 25	0.20	1.18	740	HP3420V151MCYS2WPEC
180	22 × 35	22 × 35	0.20	1.39	620	HP3420V181MCXS4WPEC
		25 × 30	0.20	1.38	620	HP3420V181MCYS3WPEC
220	22 × 40	22 × 40	0.20	1.62	500	HP3420V221MCXS5WPEC
		25 × 35	0.20	1.61	500	HP3420V221MCYS4WPEC
270	30 × 25	30 × 25	0.20	1.52	500	HP3420V221MCZS2WPEC
		22 × 45	0.20	1.88	410	HP3420V271MCXS6WPEC
		25 × 40	0.20	1.87	410	HP3420V271MCYS5WPEC
330	30 × 30	30 × 30	0.20	1.79	410	HP3420V271MCZS3WPEC
		25 × 45	0.20	2.17	340	HP3420V331MCYS6WPEC
390	35 × 25	35 × 25	0.20	1.98	340	HP3420V331MCAS2WPEC
		25 × 50	0.20	2.46	290	HP3420V391MCYS7WPEC
470	30 × 35	30 × 35	0.20	2.27	290	HP3420V391MCZS4WPEC
		35 × 30	0.20	2.28	290	HP3420V391MCAS3WPEC
560	30 × 40	30 × 40	0.20	2.61	240	HP3420V471MCZS5WPEC
		35 × 35	0.20	2.63	240	HP3420V471MCAS4WPEC
680	30 × 50	30 × 50	0.20	3.10	200	HP3420V561MCZS7WPEC
		35 × 40	0.20	3.01	200	HP3420V561MCAS5WPEC
820	30 × 60	30 × 60	0.20	3.35	170	HP3420V681MCZS9WPEC
		35 × 45	0.20	3.45	170	HP3420V681MCAS6WPEC
1,000	35 × 50	35 × 50	0.20	3.94	140	HP3420V821MCAS7WPEC
		35 × 75	0.20	4.04	120	HP3420V102MSAS12WPEC
1,200	40 × 56	40 × 56	0.20	3.91	120	HP3420V102MSBS8WPEC
		35 × 100	0.20	4.99	100	HP3420V122MSAS17WPEC
1,500	40 × 76	40 × 76	0.20	4.59	100	HP3420V122MSBS12WPEC
		40 × 101	0.20	6.32	70	HP3420V182MSBS17WPEC

Rated Voltage (V. DC)	Capacitance (μF)	Case size φ D × L (mm)	tanδ 20°C, 120Hz	Ripple current (Arms) 85°C, 120Hz	ESR(typ.) (mΩ) 20°C, 100Hz	Product name
150	22 × 30	22 × 30	0.20	1.20	740	HP32W151MCXS3WPEC
		25 × 25	0.20	1.18	740	HP32W151MCYS2WPEC
180	22 × 35	22 × 35	0.20	1.39	620	HP32W181MCXS4WPEC
		25 × 30	0.20	1.38	620	HP32W181MCYS3WPEC
220	22 × 40	22 × 40	0.20	1.62	500	HP32W221MCXS5WPEC
		25 × 35	0.20	1.61	500	HP32W221MCYS4WPEC
270	30 × 25	30 × 25	0.20	1.52	500	HP32W221MCZS2WPEC
		22 × 45	0.20	1.88	410	HP32W271MCXS6WPEC
		25 × 40	0.20	1.87	410	HP32W271MCYS5WPEC
330	30 × 30	30 × 30	0.20	1.79	410	HP32W271MCZS3WPEC
		25 × 45	0.20	2.17	340	HP32W331MCYS6WPEC
390	35 × 25	35 × 25	0.20	1.98	340	HP32W331MCAS2WPEC
		25 × 50	0.20	2.46	290	HP32W391MCYS7WPEC
470	30 × 35	30 × 35	0.20	2.27	290	HP32W391MCZS4WPEC
		35 × 30	0.20	2.28	290	HP32W391MCAS3WPEC
560	30 × 40	30 × 40	0.20	2.61	240	HP32W471MCZS5WPEC
		35 × 35	0.20	2.63	240	HP32W471MCAS4WPEC
680	30 × 50	30 × 50	0.20	3.10	200	HP32W561MCZS7WPEC
		35 × 40	0.20	3.01	200	HP32W561MCAS5WPEC
820	30 × 60	30 × 60	0.20	3.12	170	HP32W681MCZS9WPEC
		35 × 45	0.20	3.45	170	HP32W681MCAS6WPEC
1,000	35 × 50	35 × 50	0.20	3.94	140	HP32W821MCAS7WPEC
		35 × 75	0.20	4.04	120	HP32W102MSAS12WPEC
1,200	40 × 56	40 × 56	0.20	4.04	120	HP32W102MSBS9WPEC
		35 × 100	0.20	4.99	100	HP32W122MSAS17WPEC
1,500	40 × 76	40 × 76	0.20	4.59	100	HP32W122MSBS12WPEC
		40 × 101	0.20	5.76	80	HP32W152MSBS17WPEC

ALUMINUM ELECTROLYTIC CAPACITORS

### Life time graph

Useful life depending on ambient temperature  $T_a$  and ripple current operating conditions  $I$  versus rated ripple current at 85°C, 120Hz

