ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

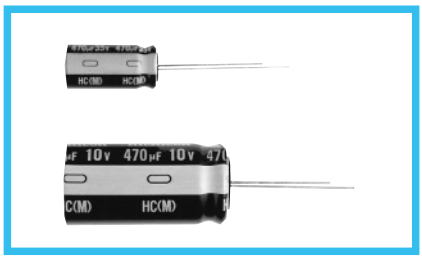
HC Low Impedance series

Smaller | Low Impedance | Anti-Solvent Feature

- Lower impedance than HD series.
- Compliant to the RoHS directive (2002/95/EC).

Products which are scheduled to be discontinued.
Not recommended for new designs

HC ← Low Impedance — HD



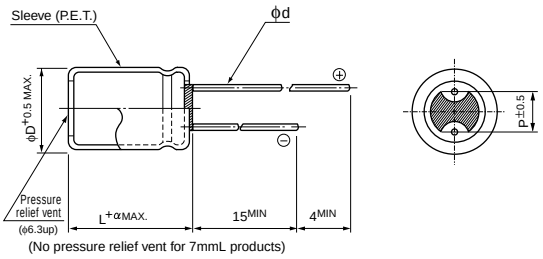
■Specifications

Item	Performance Characteristics						
Category Temperature Range	–40 to +105˚C						
Rated Voltage Range	6.3 to 35V						
Rated Capacitance Range	4.7 to 1000μF						
Capacitance Tolerance	±20% at 120Hz, 20˚C						
Leakage Current	After 2 minutes' application of rated voltage, leakage current is less than 0.01CV or 3 (μA), whichever is greater.						
Tangent of loss angle (tan δ)	Rated voltage (V)	6.3	10	16	25	35	120Hz 20˚C
	tan δ (MAX.)	0.15	0.13	0.12	0.10	0.10	
Stability at Low Temperature	Rated voltage (V)	6.3	10	16	25	35	120Hz
	Impedance ratio ZT / Z20 (MAX.) Z–40˚C / Z+20˚C	2	2	2	2	2	
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20˚C after D.C. bias plus rated ripple current is applied for 2000 hours (1000 hours for φD=4, 5 and 6.3) at 105˚C, the peak voltage shall not exceed the rated voltage.						

Capacitance change	Within ± 20% of the initial capacitance value
tan δ	200% or less than the initial specified value
Leakage current	Less than or equal to the initial specified value

Marking	Printed with white color letter on black sleeve.

■Radial Lead Type



(No pressure relief vent for 7mmL products)

α	
	(L = 7) 1.0
	(L ≧11) 1.5

(mm)

φD	4	5	6.3	8	10
P	1.5	2.0	2.5	3.5	5.0
φd	0.45	0.45	0.5 (0.45)	0.6	0.6

( ) : Applied to 7mmL products

• Please refer to page 20 about the end seal configulation.

Type numbering system (Example : 10V 470μF)

1	2	3	4	5	6	7	8	9	10	11
U	H	C	1	A	4	7	1	M	P	D

Configuration ※
Capacitance tolerance (± 20%)
Rated capacitance (470μF)
Rated voltage (10V)
Series name
Type

※ Configuration

φ D	Pb-free leadwire Pb-free PET sleeve
4	DD
5	
6.3 (7L)	
6.3 (11L)	ED
8 · 10	PD

Please refer to page 20, 21, 22 about the formed or taped product spec.
Please refer to page 4 for the minimum order quantity.

● Dimension table in next page.

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HC series

■Standard Ratings

V (Code) / Item / Cap.(μF) / Code	6.3 (0J)			10 (1A)			16 (1C)		
	Case size φD × L (mm)	Impedance (Ω) MAX. 20°C / 100kHz	Rated ripple (mArms) 105°C / 100kHz	Case size φD × L (mm)	Impedance (Ω) MAX. 20°C / 100kHz	Rated ripple (mArms) 105°C / 100kHz	Case size φD × L (mm)	Impedance (Ω) MAX. 20°C / 100kHz	Rated ripple (mArms) 105°C / 100kHz
22	220				4 × 7	0.49	230	5 × 7	0.26	350
33	330	4 × 7	0.48	230	5 × 7	0.26	350	5 × 7	0.26	350
47	470	5 × 7	0.26	350	5 × 7	0.26	350	6.3 × 7	0.15	480
100	101	6.3 × 7	0.15	480	6.3 × 7	0.15	480	6.3 × 11	0.078	640
220	221	6.3 × 11	0.077	640	8 × 11.5	0.044	910	8 × 11.5	0.044	910
330	331	8 × 11.5	0.043	910	8 × 11.5	0.043	910	10 × 12.5	0.030	1230
470	471	8 × 11.5	0.043	910	10 × 12.5	0.030	1230	10 × 16	0.025	1650
1000	102	10 × 16	0.024	1650						

V (Code) / Item / Cap. (μF) / Code	25 (1E)			35 (1V)		
	Case size φD × L (mm)	Impedance (Ω) MAX. 20°C / 100kHz	Rated ripple (mArms) 105°C / 100kHz	Case size φD × L (mm)	Impedance (Ω) MAX. 20°C / 100kHz	Rated ripple (mArms) 105°C / 100kHz
4.7	4R7			4 × 7	0.64	230
10	100	4 × 7	0.52	230	5 × 7	0.33	350
22	220	5 × 7	0.27	350	6.3 × 7	0.17	480
33	330	6.3 × 7	0.16	480	6.3 × 7	0.16	480
47	470	6.3 × 7	0.15	480	6.3 × 11	0.089	640
100	101	6.3 × 11	0.078	640	8 × 11.5	0.048	910
220	221	10 × 12.5	0.031	1230	10 × 16	0.026	1650
330	331	10 × 16	0.026	1650			

●Frequency coefficient of rated ripple current

Cap. (μF) / Frequency	120Hz	1kHz	10kHz	100kHz
4.7 to 33	0.40	0.68	0.90	1.00
47 to 330	0.47	0.75	0.95	1.00
470 to 1000	0.55	0.85	0.98	1.00