

Aluminum Electrolytic Capacitor

HN series

- Non-polarity standard product, 105°C 2000hours.
- Suitable for DC two-way return circuit.
- RoHS Compliance
- 無極性105°C 2000小時標準品。
- 適用於直流雙向迴路。

SPECIFICATIONS

Items 項目	Characteristics 特性									
Capacitance Tolerance 靜電容量誤差	± 20%(120Hz,20℃)									
Operating Temperature Range 適用溫度範圍	-40 ~ +105℃									
Rated Voltage Range 額定電壓範圍	6.3 ~ 160VDC									
Leakage Current 洩漏電流	I ≤ 0.03CV or 3 (μA) which is greater.(After 5 minutes application of DC rated voltage, at 20 ℃)									
Dissipation Factor 散逸因素(tan δ)	Measurement Frequency: 120Hz. Temperature: 20℃									
	Rated Voltage(V)	6.3	10	16	25	35	50	63	100	160
	tan δ(Max)	0.26	0.24	0.22	0.20	0.16	0.14	0.12	0.10	0.15
	When nominal capacitance over 1000μF, tanδ shall be added 0.02 to the listed value with increase of every 1000μF .									
Low Temperature Stability 低溫特性 Impedance Ratio(Max) 阻抗比率(最大值)	Measurement Frequency: 120Hz.									
	Rated Voltage(V)	6.3	10	16	25	35	50	63	100	160
	Z(-25℃)/Z(20℃)	4	3	2	2	2	2	2	2	3
	Z(-40℃)/Z(20℃)	10	8	6	5	4	4	3	3	4
Load Life 負荷壽命	2000hours with the polarity inverted every 250 hours at 105℃									
	Capacitance Change		Within ± 20% of Initial Value							
	tan δ		200% or less of Initial Specified Value							
	Leakage Current		Initial Specified Value or less							
Shelf Life 放置壽命	The following specifications shall be satisfied when the capacitors are restored to 20℃ after exposing them for 1,000 hours 105℃ without voltage applied. Before the measurement, the capacitor shall be preconditioned by applying voltage according to them 4.1 of JIS C5101-4.									
	Capacitance Change		Within ± 20% of Initial Value							
	tan δ		200% or less of Initial Specified Value							
	Leakage Current		Initial Specified Value or less							
Standards 參照標準	JIS C 5101-4 (IEC 60384)									

Frequency Coefficient of Permissible Ripple Current

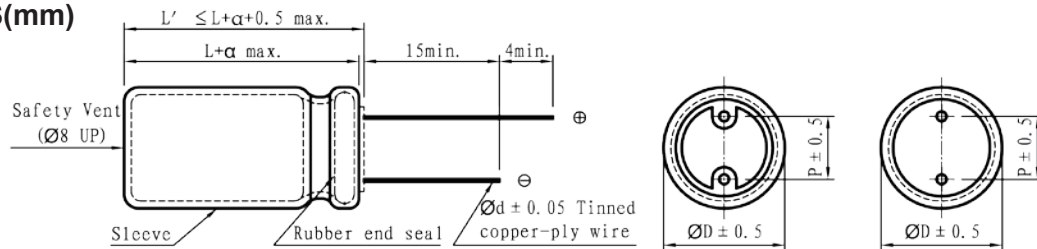
Capacitance (μF)	Frequency (Hz)			
	50	120	1K	$\geq 10K$
< 100	0.80	1.00	1.30	1.50
≥ 100	0.80	1.00	1.15	1.20

The endurance of capacitors is reduced with internal heating produced by ripple current at the rate of halving the lifetime with every 5°C rise. When long life performance is required in actual use, the rms ripple current has to be reduced.

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DIMENSIONS(mm)



ϕD	4	5	6.3	8	10	13	16
P	1.5	2.0	2.5	3.5	5.0	5.0	7.5
ϕd	0.45	0.5	0.5	0.5	0.6	0.6	0.8

α	(L < 16) 1.0 (L $\geq$ 16) 2.0
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STANDARD RATINGS

D×L (mm) ; R.C.(mA rms) at 105°C 120Hz

Cap (μF)	V (Code)	6.3 (0J)		10 (1A)		16 (1C)		25 (1E)	
	Item	D x L	R.C.	D x L	R.C.	D x L	R.C.	D x L	R.C.
3.3								4x7	15
4.7						4x7	18	5x7	18
10				4x7	23	5x7	27	5x11	36
						5x11	30	6.3x7	28
22		5x7	33	5x7	36	6.3x7	41	6.3x11	55
				5x11	42	6.3x11	52	8x7	42
33		5x7	40	6.3x7	45	6.3x11	66	8x12	75
		5x11	48	6.3x11	58	8x7	52		
47		6.3x7	49	6.3x11	70	8x12	90	10x13	96
		6.3x11	65	8x7	55				
100		8x12	105	10x13	125	10x13	140	10x16	158
220		10x13	168	10x16	205	10x20	285	13x21	306
330		10x16	230	10x20	278	13x21	346	13x25	415
470		10x20	330	13x21	370	13x25	460	16x26	545
1000		13x25	550	16x26	665	16x26	750	16x32	870

Cap (μF)	V (Code)	35 (1V)		50 (1H)		63 (1J)		100 (2A)		160 (2C)	
	Item	D x L	R.C.	D x L	R.C.	D x L	R.C.	D x L	R.C.	D x L	R.C.
0.1				4x7	2.1	4x7	2.6				
0.22				4x7	4.5	4x7	5.0				
0.33				4x7	5.6	4x7	6.1				
0.47				4x7	6.6	4x7	7.3				
0.1~0.47				5x11	8	5x11	5	5x11	10	5x11	4
1				4x7	9.7	4x7	10	5x11	15	6.3x11	12
				5x11	12	5x11	15				
2.2		4x7	13	5x7	14	5x7	16	6.3x11	24	6.3x11	17
				5x11	18	5x11	22				
3.3				5x7	18	6.3x7	20	8x12	32	8x12	25
				5x11	22	6.3x11	26				
4.7		5x7	20	6.3x7	22	6.3x11	32	8x12	40	8x12	30
		5x11	25	6.3x11	30	8x7	24				
5.6		5x11	28	6.3x11	35	6.3x11	40	8x12	48	8x14	35
6.8		5x11	33	6.3x11	40	8x12	45	8x14	52	8x16	41
10		6.3x11	40	8x12	50	8x12	55	10x13	65	10x16	55
		8x7	30								
22		8x12	68	10x13	82	10x16	90	10x20	120	13x21	106
33		10x13	90	10x16	100	10x20	128	13x21	168	13x21	130
47		10x13	110	10x20	146	10x20	156	13x21	200	13x25	167
56		10x16	140	13x21	195	13x21	218	13x21	250	16x26	206
100		10x20	196	13x25	260	13x25	275	13x25	295	16x32	300
220		13x25	365	16x26	445	16x32	486				
330		16x26	492	16x32	595						
470		16x32	595								

※ 13mm may be replaced by 12.5mm upon customer's request.