

CD13HL SERIES



ALUMINUM ELECTROLYTIC CAPACITORS

- Load life of 5000 hours at 105°C
- Wide temperature, long life

SPECIFICATIONS



Item	Characteristics								
Operating Temperature Range(°C)	+40~+105								
Rated Voltage Range (V)	350, 400,450								
Nominal capacitance range (μF)	1000~15000								
Capacitance Tolerance(20°C,120Hz)	±20%								
Leakage current (μA)	$I \leq 0.01CV$ or 5mA, whichever is smaller.(at 20°C,after 5 minutes) C: Nominal capacitance (μF) V: Rated voltage (V)								
Dissipation Factor(20°C,120Hz)	$\tan \delta \leq 0.15$								
Load Life(+105°C)	<table border="1"> <tr> <td>Time</td><td>5000hours</td></tr> <tr> <td>Leakage current</td><td>Not more than the specified value</td></tr> <tr> <td>Capacitance Change</td><td>Within ±15% of the initial value</td></tr> <tr> <td>Dissipation Factor</td><td>Not more than 175% of the specified value</td></tr> </table>	Time	5000hours	Leakage current	Not more than the specified value	Capacitance Change	Within ±15% of the initial value	Dissipation Factor	Not more than 175% of the specified value
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Shelf Life(+105°C)	<table border="1"> <tr> <td>Time</td><td>1000hours</td></tr> <tr> <td>Leakage current</td><td>Not more than the specified value</td></tr> <tr> <td>Capacitance Change</td><td>Within ±15% of the initial value</td></tr> <tr> <td>Dissipation Factor</td><td>Not more than 175% of the specified value</td></tr> </table> After Test: Rated voltage to be applied for 60 minutes,24 to 48 hours before measurement	Time	1000hours	Leakage current	Not more than the specified value	Capacitance Change	Within ±15% of the initial value	Dissipation Factor	Not more than 175% of the specified value
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DIMENSIONS

MM

MULTIPLIER FOR RIPPLE CURRENT

Lead spacing and diameter

ΦD	51	64	77	90
F	22	28.6	32	32

Frequency coefficient

Frequency(Hz)	50,60	120	300	1K	≥10K
Coefficient	0.7	1.0	1.10	1.30	1.40

Temperature coefficient

Temperature(℃)	+40	+60	+70	+85
Coefficient	2.44	2.16	2.00	2.00

■ STANDARD RATINGS

WV(V)	350		400		450	
Cap(μF)	ΦDxL(mm)	Ripple(A)	ΦDxL(mm)	Ripple (A)	ΦDxL(mm)	Ripple (A)
1000	51X75	3.9	51X75	3.9	51X96	4.2
1200	51X75	4.2	51X96	4.6	51X115	5.0
1500	51X96	5.2	51X115	5.6	51X130	5.9
1800	51X96	5.7	51X130	6.4	64X96	6.3
2200	51X130	7.1	64X96	6.9	64X115	7.4
2700	64X96	7.7	64X115	8.2	64X130	8.6
					77X115	8.7
3300	64X115	9.1	64X130	9.5	64X155	10.2
					77X130	10.1
3900	64X130	10.4	64X155	11.1	64X195	12.3
			77X115	10.4		
4700	64X155	12.2	64X196	13.4	77X155	12.9
	77X115	11.5	77X130	12.0		
5600	64X195	14.6	64X195	14.6	77X195	15.4
	77X130	13.1	77X155	14.0	90X157	14.9
6800	77X155	15.5	90X157	16.5	90X196	18.0
8200	90X157	18.1	90X157	18.1	90X196	19.8
10000	90X157	19.9	90X196	21.7	90X236	23.6
12000	90X196	23.8	90X236	25.8	-	-
15000	90X236	28.8	-	-	-	-

■ Ripple Current: 85℃,100Hz or 120Hz;

The specific capacitance and case size are available on request.