GA SERIES

Axial Type Capacitors 85℃ 2000HR　一般（臥式）標準品 85℃

Features

- For general purpose.
- Wide CV value range.
- Sefely vent construction products, guaranteed 2,000 hours at 85℃.

Specifications

<table>
<tr><th>Items</th><th colspan="15">Performance Characteristics</th></tr>
<tr><td>Operating Temperature Range</td><td colspan="8">−40 to + 85℃</td><td colspan="7">−25 to + 85℃</td></tr>
<tr><td>Rated Working Voltage Range</td><td colspan="8">6.3 to 100V DC</td><td colspan="7">160 to 400V DC</td></tr>
<tr><td>Nominal Capacitance Range</td><td colspan="8">0.47 to 15000 μF</td><td colspan="7">0.47 to 220 μF</td></tr>
<tr><td>Capacitance Tolerance</td><td colspan="15">±20℃ (120Hz, +20℃)</td></tr>
<tr><td rowspan="2">Leakage Current</td><td colspan="8">1≦0.01CV or 3(μA) max</td><td colspan="7">1≦0.03CV + 20(μA) max</td></tr>
<tr><td colspan="15">Whichever is greater after 3 minutes.　I : Leakage Current (μA)
C: Rated Capacitance (μA)
V: Working Voltage (v)</td></tr>
<tr><td rowspan="3">Dissipation Factor (tan δ)
(120Hz, +20℃)</td><td>Working voltage (v)</td><td>6.3</td><td>10</td><td>16</td><td>25</td><td>35</td><td>50</td><td>63</td><td>100</td><td>160</td><td>200</td><td>250</td><td>350</td><td>400</td><td>450</td></tr>
<tr><td>tan δ (max)</td><td>0.22</td><td>0.19</td><td>0.16</td><td>0.14</td><td>0.12</td><td>0.10</td><td>0.10</td><td>0.07</td><td>0.15</td><td>0.15</td><td>0.15</td><td>0.20</td><td>0.24</td><td>0.24</td></tr>
<tr><td colspan="15">Add 0.02 per 1000μF for moer than 1000μF.</td></tr>
<tr><td>Maximum Permissible Ripple Current</td><td colspan="15">Refer to standard products table (120Hz,+ 85℃)
Correction factor for frequency.
<table>
<tr><th>W.V. (V.DC.) \ Freq. (Hz)</th><th></th><th>60</th><th>120</th><th>1K</th><th>10K</th><th>100K</th></tr>
<tr><td rowspan="3">6.3~50</td><td>0.1~330</td><td>0.85</td><td>1</td><td>1.30</td><td>1.40</td><td>1.55</td></tr>
<tr><td>470~3300</td><td>0.95</td><td>1</td><td>1.15</td><td>1.20</td><td>1.25</td></tr>
<tr><td>≧4700</td><td>0.95</td><td>1</td><td>1.10</td><td>1.20</td><td>1.20</td></tr>
<tr><td rowspan="3">63~100</td><td>0.47~33</td><td>0.75</td><td>1</td><td>1.55</td><td>1.65</td><td>1.80</td></tr>
<tr><td>47~330</td><td>0.75</td><td>1</td><td>1.40</td><td>1.60</td><td>1.65</td></tr>
<tr><td>≧330</td><td>0.80</td><td>1</td><td>1.30</td><td>1.35</td><td>1.40</td></tr>
<tr><td>≧160</td><td>1~220</td><td>0.70</td><td>1</td><td>1.30</td><td>1.70</td><td>1.70</td></tr>
</table></td></tr>
<tr><td>Characteristics at Low Temperature</td><td colspan="15">
<table>
<tr><td>Working voltage (v)</td><td>6.3</td><td>10</td><td>16</td><td>25</td><td>35</td><td>50</td><td>63</td><td>100</td><td>160</td><td>200</td><td>250</td><td>350</td><td>400</td><td>450</td></tr>
<tr><td>−25℃/+20℃</td><td>4</td><td>3</td><td>2</td><td>2</td><td>2</td><td>2</td><td>2</td><td>2</td><td>3</td><td>3</td><td>3</td><td>6</td><td>6</td><td>15</td></tr>
<tr><td>−40℃/+20℃</td><td>8</td><td>6</td><td>4</td><td>3</td><td>3</td><td>3</td><td>3</td><td>3</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
</table>
For capacitance value 1000> 1000μF, Add 0.5 per another 1000μF for −25℃/+25℃.
Add 1.0 per another 1000μF for −40℃/+20℃.</td></tr>
<tr><td>High Temperature Loading</td><td colspan="15">After 2000hrs. application of DC rated working voltage at + 85℃,
The capacitor shall meet the following limits:
Post test requirements at +20℃
<table>
<tr><td>Leakage current</td><td>≦the initial specified value</td></tr>
<tr><td>Capacitance change</td><td>≦±20% of initial measured value</td></tr>
<tr><td>Dissipation Factor (tan δ)</td><td>≦200% of initial specified value</td></tr>
</table></td></tr>
<tr><td>Shelf Life</td><td colspan="15">After storage for1000hrs.at + 85 ℃ with no voltage applied.
Post test requirements at +20℃
same limits for high temperature loading.</td></tr>
</table>

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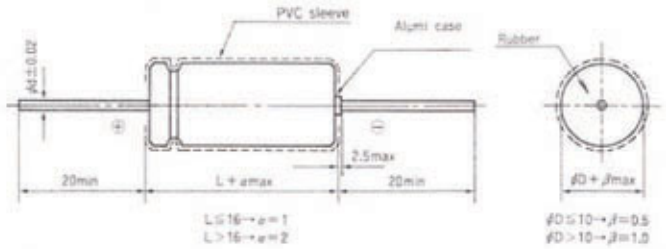
Diagram of Dimensions

Unit (mm)



Dφ (+0.5Max.)	6.3	8	10	13	16	18
dφ (±0.02)	0.6	0.6	0.6	0.6	0.8	0.8

Case Size Table

φD×L (mm)

W.V. (SV) / μF	6.3 (8)	10 (13)	16 (20)	25 (32)	35 (44)	50 (63)	63 (79)	100 (125)
0.47					→	6.3×13	→	6.3×13
1.0					→	6.3×13	→	6.3×13
2.2					→	6.3×13	→	6.3×13
3.3					→	6.3×13	→	6.3×13
4.7					→	6.3×13	→	6.3×13
10					→	6.3×13	6.3×13	6.3×16
22				→	6.3×13	6.3×16	6.3×16	8×16
33			→	6.3×13	6.3×16	6.3×16	6.3×16	8×21
47	→	6.3×13	6.3×13	6.3×16	6.3×16	6.3×16	8×16	8×21
100	6.3×13	6.3×16	6.3×16	6.3×16	8×16	8×16	8×21	10×27
220	6.3×16	6.3×16	8×16	8×16	8×21	10×22	10×27	13×32
330	8×16	8×16	8×16	8×21	10×22	10×27	13×27	13×35
470	8×16	8×16	8×21	10×22	10×27	13×27	13×32	16×43
1,000	10×22	10×22	10×27	13×27	13×32	13×35	16×33	
2,200	13×27	13×27	13×32	13×35	16×33	18×43		
3,300	13×27	13×32	13×35	16×33	16×43			
4,700	13×32	13×35	16×33	16×43				
6,800	16×33	16×33	16×43					
10,000	16×43	16×43						
15,000	18×43							

※All blank dimensions is the same dimensions as "→" point to.

Case Size Table

φD×L (mm)

W.V. (SV) / μF	160 (200)	200 (250)	250 (300)	350 (400)	400 (450)
0.47	6.3×13	6.3×13	6.3×13	6.3×16	6.3×16
1.0	6.3×13	6.3×13	6.3×16	8×16	8×16
2.2	6.3×16	6.3×16	8×16	8×21	8×21
3.3	8×16	8×16	8×16	10×22	10×22
4.7	8×16	8×16	10×22	10×27	10×27
10	10×22	10×22	10×27	13×27	13×27
22	10×27	13×27	13×27	13×32	16×33
33	13×27	13×32	13×32	16×33	16×43
47	13×32	13×32	13×35	18×43	
100	16×33	16×43	16×43		
220	18×43				