

VD Chip Type Aluminum Electrolytic Capacitors

Features

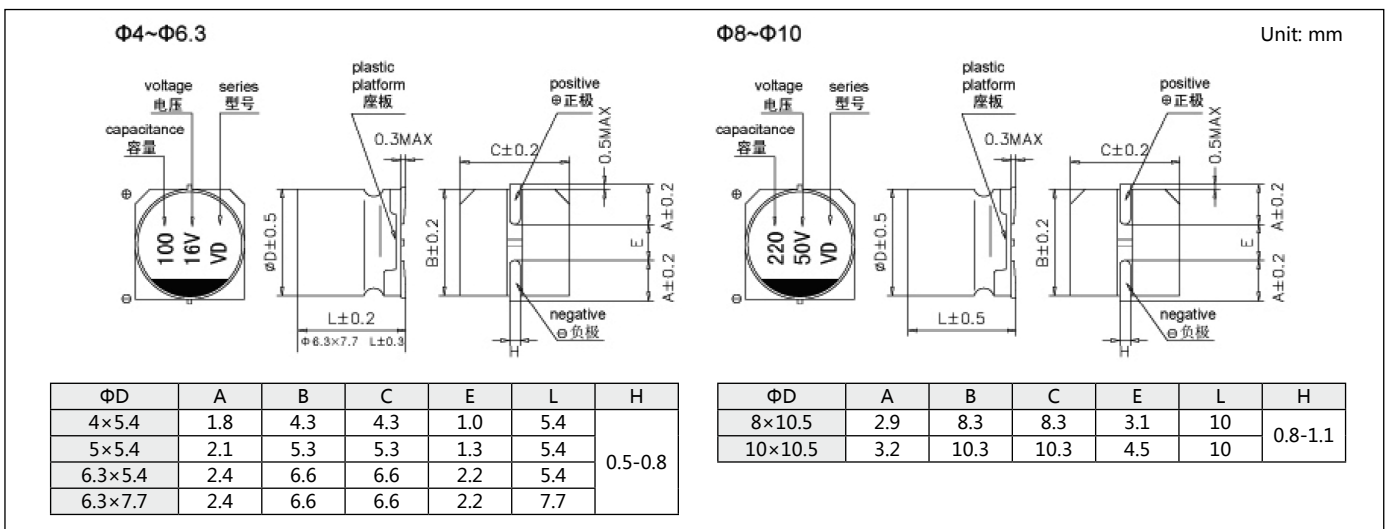
- Low impedance.
- Reflow soldering is available.
- Available for high density surface mounting.
- Operating over wide temperature range (-55°C ~ +105°C).
- Adapted to the RoHS directive.



Specifications

Item	Performance Characteristics																					
Operating Temperature Range	-55°C ~ +105°C																					
Rated Voltage Range	6.3~50V																					
Nominal Capacitance Range	1~1500μF																					
Nominal Capacitance Tolerance	±20%(+20°C, 120Hz)																					
Leakage Current	$I \leq 0.01C_R U_R$ or 3(μA), Whichever is greater (at 20°C, after 2 minutes) C _R : Nominal capacitance(μF), U _R : Rated voltage(V)																					
Dissipation Factor(Max) (tgδ, +20°C, 120Hz)	<table border="1"> <thead> <tr> <th>U_R(V)</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> </tr> </thead> <tbody> <tr> <td>tgδ</td> <td>0.26(0.28)</td> <td>0.20(0.24)</td> <td>0.16(0.20)</td> <td>0.14(0.16)</td> <td>0.12(0.14)</td> <td>0.12(0.14)</td> </tr> </tbody> </table> <p>注：()为ΦD>8 products</p>	U _R (V)	6.3	10	16	25	35	50	tgδ	0.26(0.28)	0.20(0.24)	0.16(0.20)	0.14(0.16)	0.12(0.14)	0.12(0.14)							
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Load Life	After 5000 hours(2000 hours for ΦD=4,5 and 6.3) application of rated voltage at 105°C, the capacitor shall meet the following requirement: <table border="1"> <tbody> <tr> <td>Capacitance change</td> <td>Within ±30% of the initial value</td> </tr> <tr> <td>Dissipation factor</td> <td>Not more than 200% of the initial specified value</td> </tr> <tr> <td>Leakage current</td> <td>Not more than the initial specified value</td> </tr> </tbody> </table>	Capacitance change	Within ±30% of the initial value	Dissipation factor	Not more than 200% of the initial specified value	Leakage current	Not more than the initial specified value															
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Shelf Life	After storage for 1000 hours at 105°C, the capacitors shall meet the requirement of load life above.																					
Low Temperature Stability Impedance Ratio(120Hz)	<table border="1"> <thead> <tr> <th>U_R(V)</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> </tr> </thead> <tbody> <tr> <td>Z-25°C/+20°C</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>Z-40°C/+20°C</td> <td>5</td> <td>4</td> <td>4</td> <td>3</td> <td>3</td> <td>3</td> </tr> </tbody> </table>	U _R (V)	6.3	10	16	25	35	50	Z-25°C/+20°C	3	2	2	2	2	2	Z-40°C/+20°C	5	4	4	3	3	3
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Resistance to Soldering Heat	The capacitors shall be kept on the hot plate maintained at 250°C for 30 seconds. After removing from the hot plate and restored at room temperature, they meet the following requirement: <table border="1"> <tbody> <tr> <td>Capacitance change</td> <td>Within ±10% of the initial value</td> </tr> <tr> <td>Dissipation factor</td> <td>Not more than the initial specified value</td> </tr> <tr> <td>Leakage current</td> <td>Not more than the initial specified value</td> </tr> </tbody> </table>	Capacitance change	Within ±10% of the initial value	Dissipation factor	Not more than the initial specified value	Leakage current	Not more than the initial specified value															
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Diagram of Dimensions



Nominal capacitance, rated voltage, rated ripple current and case size table

V	6.3			10			16			25			35			50		
Item μF	ΦD×L (mm)	Impedance Ω	I~ (mA)	ΦD×L (mm)	Impedance Ω	I~ (mA)	ΦD×L (mm)	Impedance Ω	I~ (mA)	ΦD×L (mm)	Impedance Ω	I~ (mA)	ΦD×L (mm)	Impedance Ω	I~ (mA)	ΦD×L (mm)	Impedance Ω	I~ (mA)
1.0																4×5.4	5.00	30
2.2																4×5.4	5.00	30
3.3																4×5.4	5.00	30
4.7													4×5.4	1.80	80	5×5.4	1.52	85
10										4×5.4	1.80	80	5×5.4	0.76	150	6.3×5.4	0.88	165
15							4×5.4	1.80	80	5×5.4	0.76	150	5×5.4	0.76	150	6.3×5.4	0.88	165
22				4×5.4	1.80	80	5×5.4	0.76	80	5×5.4	0.76	80	5×5.4	0.76	150	6.3×5.4	0.88	165
27	4×5.4	1.80	80	5×5.4	0.76	150	5×5.4	0.76	150	6.3×5.4	0.44	230	6.3×5.4	0.44	230	6.3×7.7	0.68	185
33	5×5.4	0.76	150	5×5.4	0.76	150	6.3×5.4	0.44	230	6.3×5.4	0.44	230	6.3×5.4	0.44	230	6.3×7.7	0.68	185
47	5×5.4	0.76	150	6.3×5.4	0.44	230	6.3×5.4	0.44	230	6.3×5.4	0.44	230	6.3×5.4	0.44	230	6.3×7.7	0.68	185
56	5×5.4	0.76	150	6.3×5.4	0.44	230	6.3×5.4	0.44	230	6.3×5.4	0.44	230	6.3×7.7	0.34	280	8×10.5	0.34	350
68	6.3×5.4	0.44	230	6.3×5.4	0.44	230	6.3×5.4	0.44	230	6.3×5.4	0.44	230	6.3×7.7	0.34	280	8×10.5	0.34	350
100	6.3×5.4	0.44	230	6.3×5.4	0.44	230	6.3×5.4	0.44	230	6.3×7.7	0.34	280	8×10.5	0.17	600	8×10.5	0.18	300
150	6.3×5.4	0.44	230	6.3×5.4	0.44	230	6.3×7.7	0.34	280	8×10.5	0.17	600	8×10.5	0.17	600	8×10.5	0.18	670
220	6.3×5.4	0.44	230	6.3×7.7	0.34	280	6.3×7.7	0.34	280	8×10.5	0.17	600	8×10.5	0.17	600	10×10.5	0.18	670
330	6.3×7.7	0.34	280	8×10.5	0.17	600	8×10.5	0.17	600	8×10.5	0.17	600	10×10.5	0.09	850			
470	8×10.5	0.17	600	8×10.5	0.17	600	8×10.5	0.17	600	10×10.5	0.09	850						
680	8×10.5	0.17	600	10×10.5	0.09	670	10×10.5	0.09	850									
1000	8×10.5	0.17	600	10×10.5	0.09	850												
1500	10×10.5	0.09	850															

I~ = Rated ripple current (mA) (105° C , 100KHz)

Ω Max (20° C , 100KHz)

Frequency coefficient of ripple current

Frequency	50Hz	120Hz	300Hz	1kHz	≥ 10KHz
Coefficient	0.35	0.50	0.64	0.83	1.00