

# EV Ultra Low Impedance Series

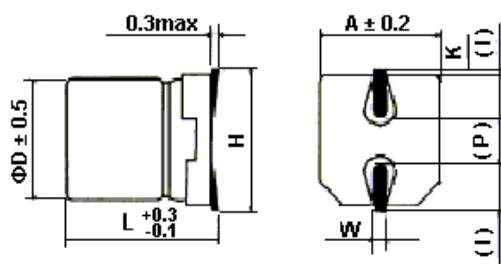
- Features : 105°C 2000 hours , Low profile vertical chip, Ultra low impedance
- Recommended Applications: AV(TV,Video,Audio) ,Monitor/Computer, OA/HA/Communication ,SMPS
- Corresponding product to RoHS



## Specifications

Item	Characteristics																								
Operating Temperature Range	-40 ~ +105°C																								
Rated Voltage Range (WV)	6.3 ~ 35VDC																								
Capacitance Range	4.7 ~ 1500 $\mu$ F																								
Capacitance Tolerance	$\pm 20\%$ at 120Hz , 20°C																								
Leakage Current (MAX) (20°C)	$I \leq 0.01CV$ or $3 \mu A$ whichever is greater(After rated voltage applied for 2 minutes) I= Leakage Current ( $\mu A$ ) C= Nominal Capacitance ( $\mu F$ ) V= Rated Voltage (V)																								
Dissipation Factor (MAX) (tan $\delta$ ) (120Hz ,20°C)	Shown in the table of standard rating																								
Low Temperature Stability Impedance Ratio (MAX)	<table border="1"> <thead> <tr> <th>WV</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> </tr> </thead> <tbody> <tr> <td>Z(120HZ)</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Z(-25°C) / Z(20°C)</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>Z(-40°C) / Z(20°C)</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> </tr> </tbody> </table>	WV	6.3	10	16	25	35	Z(120HZ)						Z(-25°C) / Z(20°C)	2	2	2	2	2	Z(-40°C) / Z(20°C)	3	3	3	3	3
WV	6.3	10	16	25	35																				
Z(120HZ)																									
Z(-25°C) / Z(20°C)	2	2	2	2	2																				
Z(-40°C) / Z(20°C)	3	3	3	3	3																				
Endurance	After applying rated voltage with rated ripple current for 2000 hours at 105°C, the capacitor shall meet the following requirement. <table border="1"> <tbody> <tr> <td>Capacitance Change</td> <td>Within<math>\pm 30\%</math> of the initial value</td> </tr> <tr> <td>Dissipation Factor</td> <td>Not more than 200% of the specified value</td> </tr> <tr> <td>Leakage Current</td> <td>Not more than the specified value</td> </tr> </tbody> </table>	Capacitance Change	Within $\pm 30\%$ of the initial value	Dissipation Factor	Not more than 200% of the specified value	Leakage Current	Not more than the specified value																		
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Leakage Current	Not more than the specified value																								
Shelf Life	After placed at 105°C without voltage applied for 1000 hours, the capacitor shall meet the same requirement as Endurance.																								

## Diagram of Dimensions(mm)



$\phi 8 \sim \phi 10$  &  $\phi 6.3 \times 7.7 = L \pm 0.3$

( ) : Reference size

$\phi D$	L	A	H	I	W	P	K
4.0	5.4	4.3	5.5 Max	1.8	0.65 $\pm$ 0.1	1.0 $\pm$ 0.2	0.35 +0.15 -0.20
5.0	5.4	5.3	6.5 Max	2.2	0.65 $\pm$ 0.1	1.5 $\pm$ 0.2	0.35 +0.15 -0.20
6.3	5.4	6.6	7.8 Max	2.6	0.65 $\pm$ 0.1	1.8 $\pm$ 0.2	0.35 +0.15 -0.20
6.3	7.7	6.6	7.8 Max	2.6	0.65 $\pm$ 0.1	1.8 $\pm$ 0.2	0.35 +0.15 -0.20
8.0	6.2	8.3	9.5 Max	3.4	0.65 $\pm$ 0.1	2.2 $\pm$ 0.2	0.35 +0.15 -0.20
8.0	10.2	8.3	10.0 Max	3.4	0.90 $\pm$ 0.2	3.1 $\pm$ 0.2	0.70 $\pm$ 0.2
10.0	10.2	10.3	12.0 Max	3.5	0.90 $\pm$ 0.2	4.6 $\pm$ 0.2	0.70 $\pm$ 0.2

## Multiplier for Ripple Current

Frequency coefficient

Frequency (Hz)	120	1K	10K	100K
Coefficient	0.70	0.80	0.90	1.00



EV

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Series

■ Case Size /  $\tan \delta$  / Max Ripple Current / Impedance

Capacitance ( $\mu$ F)	Rated (Surge) Voltage											
	6.3(8)				10(13)				16(20)			
	$\phi$ DxL	$\tan \delta$	RC	Z	$\phi$ DxL	$\tan \delta$	RC	Z	$\phi$ DxL	$\tan \delta$	RC	Z
22	4x5.4	0.26	90	1.93	4x5.4	0.19	90	1.93	4x5.4	0.16	90	1.93
									5x5.4	0.16	160	1.00
33	4x5.4	0.26	90	1.93	4x5.4	0.19	90	1.93	5x5.4	0.16	160	1.00
					5x5.4	0.19	160	1.00				
47	4x5.4	0.26	90	1.93	6.3x5.4	0.19	190	0.52	5x5.4	0.16	160	1.00
	5x5.4	0.26	160	1.00					6.3x5.4	0.16	240	0.52
100	5x5.4	0.26	160	1.00	6.3x5.4	0.19	190	0.52	6.3x5.4	0.16	240	0.52
	6.3x5.4	0.26	240	0.52								
150	6.3x7.7	0.26	240	0.30	6.3x7.7	0.19	240	0.34	6.3x7.7	0.16	280	0.34
220	6.3x7.7	0.26	240	0.30	6.3x7.7	0.19	280	0.34	6.3x7.7	0.16	280	0.34
									8x10.2	0.16	370	0.22
330	6.3x7.7	0.26	280	0.34	8x10.2	0.19	600	0.16	8x10.2	0.16	600	0.16
	8x6.2	0.26	300	0.26								
470	8x10.2	0.26	600	0.16	8x10.2	0.19	600	0.16	8x10.2	0.16	600	0.16
680	8x10.2	0.26	600	0.16	10x10.2	0.19	600	0.12	10x10.2	0.16	850	0.08
1000	8x10.2	0.26	600	0.16	10x10.2	0.19	850	0.08				
1500	10x10.2	0.26	850	0.08								

Capacitance ( $\mu$ F)	Rated (Surge) Voltage							
	25(32)				35(44)			
	$\phi$ DxL	$\tan \delta$	RC	Z	$\phi$ DxL	$\tan \delta$	RC	Z
4.7					4x5.4	0.12	90	1.93
10	4x5.4	0.14	90	1.93	4x5.4	0.12	90	1.93
					5x5.4	0.12	160	1.00
22	5x5.4	0.14	160	1.00	5x5.4	0.12	160	1.00
33	5x5.4	0.14	160	1.00	6.3x5.4	0.12	240	0.52
	6.3x5.4	0.14	240	0.52				
47	6.3x5.4	0.14	240	0.52	6.3x5.4	0.12	240	0.52
68	6.3x5.4	0.14	240	0.52	6.3x7.7	0.12	280	0.34
100	6.3x7.7	0.14	280	0.34	6.3x7.7	0.12	280	0.34
					8x10.2	0.12	600	0.16
150	8x10.2	0.14	600	0.16	8x10.2	0.12	600	0.16
220	8x10.2	0.14	600	0.16	8x10.2	0.12	600	0.16
330	8x10.2	0.14	600	0.16	10x10.2	0.12	850	0.08
470	10x10.2	0.14	850	0.08				

☆ CASE SIZE :  $\phi$  DxL(mm) 、 MAX DISSIPATION FACTOR :  $\tan \delta$  / 120Hz,20°C 、  
 MAX PERMISSIBLE RIPPLE CURRENT : RC(mArms) / 100KHz,105°C 、  
 MAX IMPEDANCE : Z( $\Omega$ ) / 100KHz,20°C